WM-FX401/FX403/FX405/FX407

SERVICE MANUAL

US Model
WM-FX401/FX403/FX405/FX407
Canadian Model
WM-FX401/FX403/FX405
AEP Model
UK Model
E Model
WM-FX403/FX405

Photo : WM-FX405

Model Name Using Similer Mechanism	WM-FX28
Tape Transport Mechanism Type	MF-WMFX305-43

SPECIFICATIONS

Radio Frequency

FM : 87.5 — 108MHz (0.1MHz step) (US, Canadian Model)
: 87.5 — 108MHz (0.05MHz step) (AEP, UK, E Model)
AM : 530 — 1,710kHz (10kHz step) (US, Canadian Model)
: 531 — 1,602kHz (9kHz step) (AEP, UK, E Model)

Power Requirements

3 V DC Batteries AA (R6) × 2
External DC 3 V power sources

Battery Life

(approximate hours when using the batteries specified below)

FX405/407

Battery	Playback	Radio
Sony Alkaline AM3 (N)	5 hours	20 hours
Sony SUM-3 (NS)	2.5 hours	12 hours

FX401/403

Battery	Playback	Radio
Sony Alkaline AM3 (N)	6 hours	25 hours
Sony SUM-3 (NS)	3 hours	15 hours

Dimensions

114.5 × 91.6 × 37 mm (4⅝ × 3⅝ × 1½ in.) (w/h/d)
incl. projecting parts

Mass 210 g (7.5 oz) incl. batteries

Supplied Accessories

- Stereo headphones (1)
- Belt clip (1)

Optional Accessories

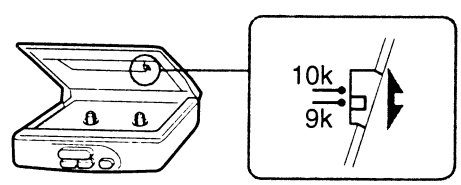
- AC power adaptor AC-E30L
- Car battery cord DCC-E130L

FX405/407

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Changing the AM tuning interval

The AM tuning interval is factory preset to 10 kHz in order to match the local frequency allocation system. If you use the receiver in an area where the frequency allocation system is based on 9 kHz interval, change the position of the switch with a thin instrument.



Note

If you change the interval, the memories of all the preset stations, the current time, and the alarm time will be canceled.

Note

Use only the recommended AC-E30L AC power adaptor (not supplied). Do not use any other AC power adaptor.

Polarity of the plug

Your dealer may not handle some of the optional accessories listed above. Please ask the dealer for detailed information.

Design and specifications are subject to change without notice.

MICROFILM

RADIO CASSETTE PLAYER

SONY®

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Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

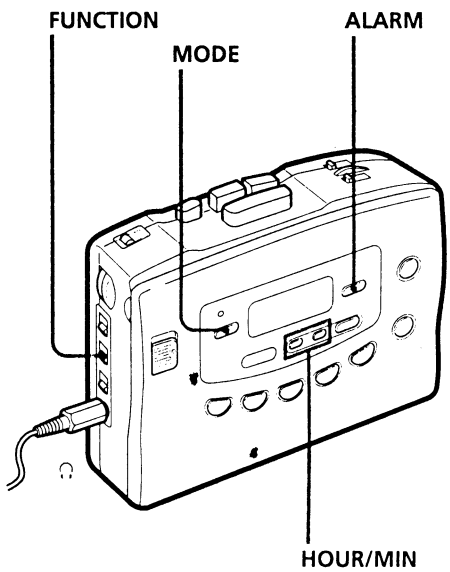
Fiexible Circuit Board Repairing

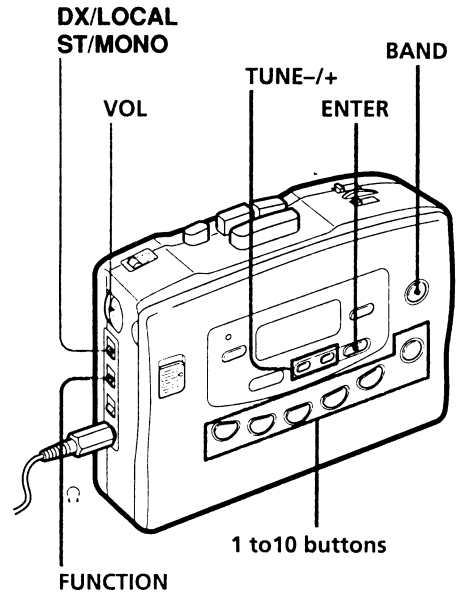
- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

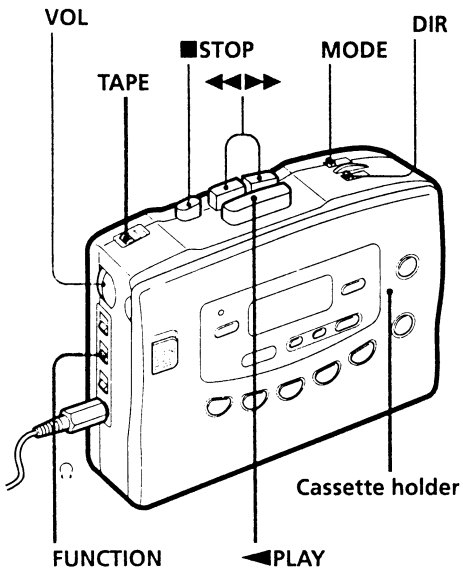
SECTION 1
GENERAL

This section is extracted from instruction manual. (WM-FX405/FX407)

Location and Function

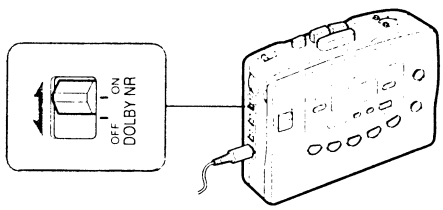






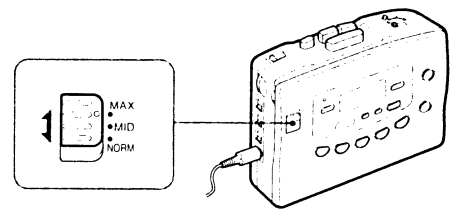
Using DOLBY NR (FX405/ FX407 only)

Set the DOLBY NR switch to ON to play Dolby NR processed tapes



Using MEGA BASS (FX405/ FX407 only)

Set the MEGA BASS selector to the MID or MAX position to produce deep and powerful sound.

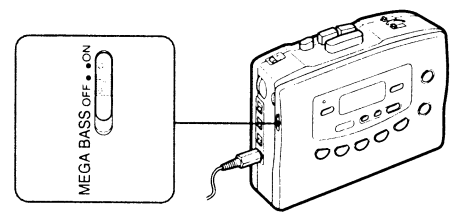


When using MEGA BASS

If the AVLS selector is set to 1 or 2, the MEGA BASS effect is reduced.

Using MEGA BASS (FX403 only)

Set the MEGA BASS selector to ON to produce deep and powerful sound.



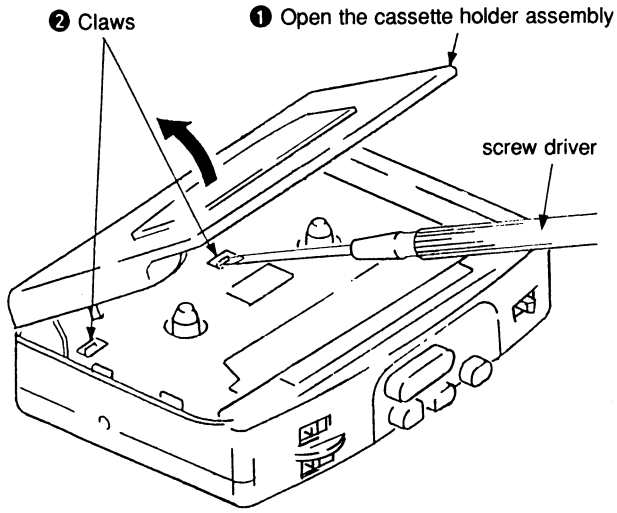
When using MEGA BASS

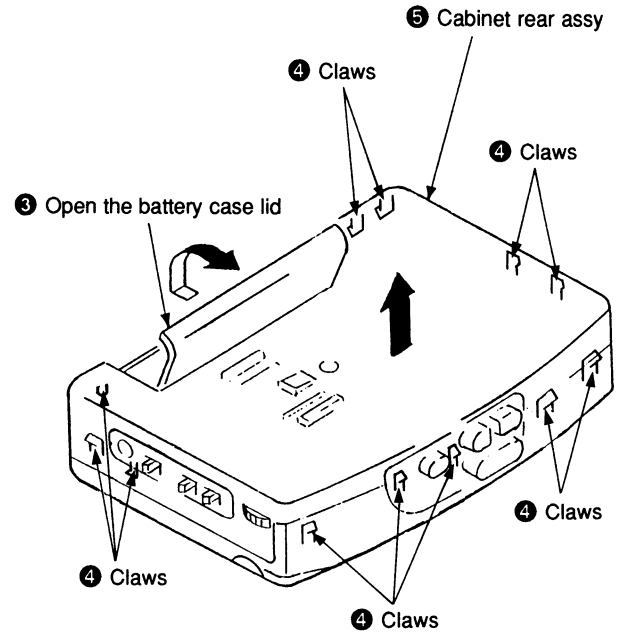
If the AVLS selector is set to 1 or 2, the MEGA BASS effect is reduced.

SECTION 2
DISASSEMBLY

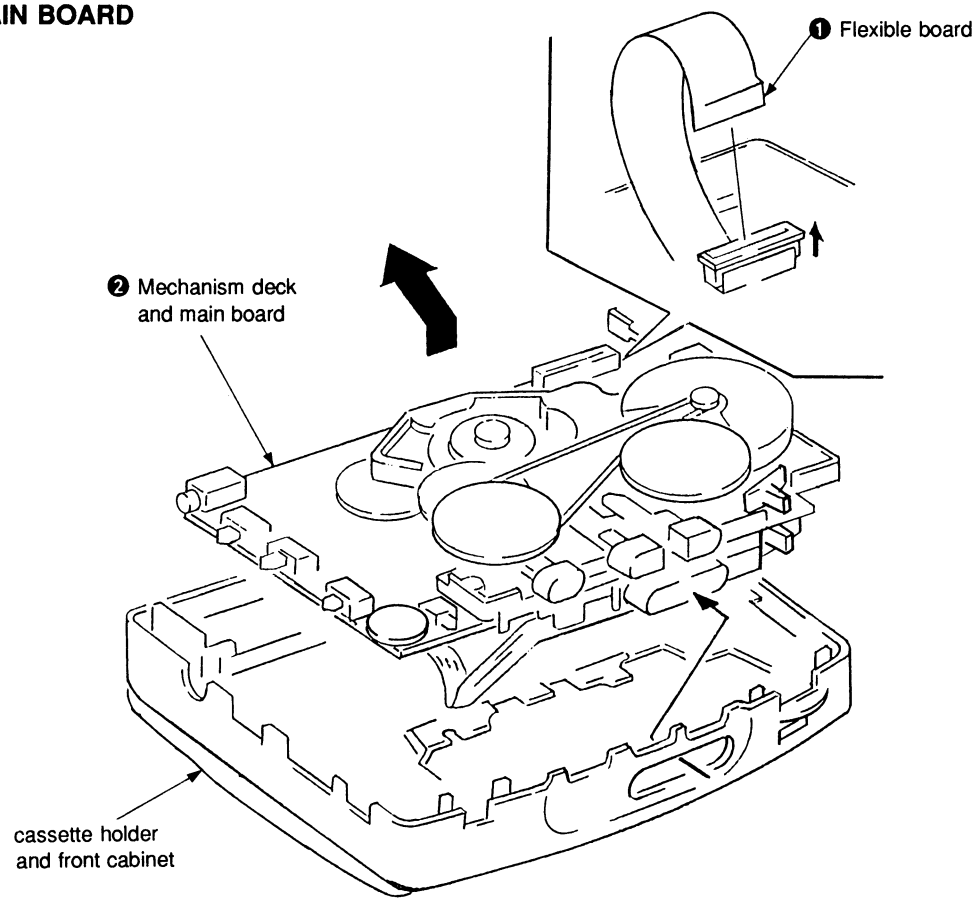
Note : Follow the disassembly procedure in the numerical order given.

2-1. REMOVAL OF CABINET REAR ASSY

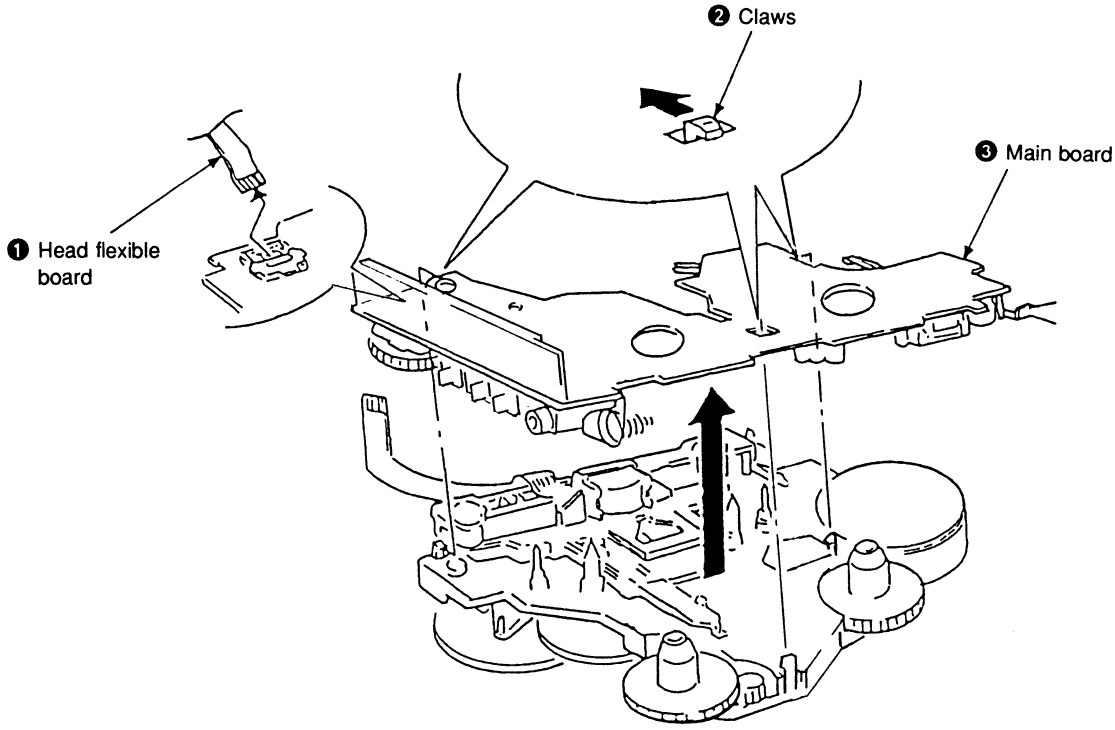




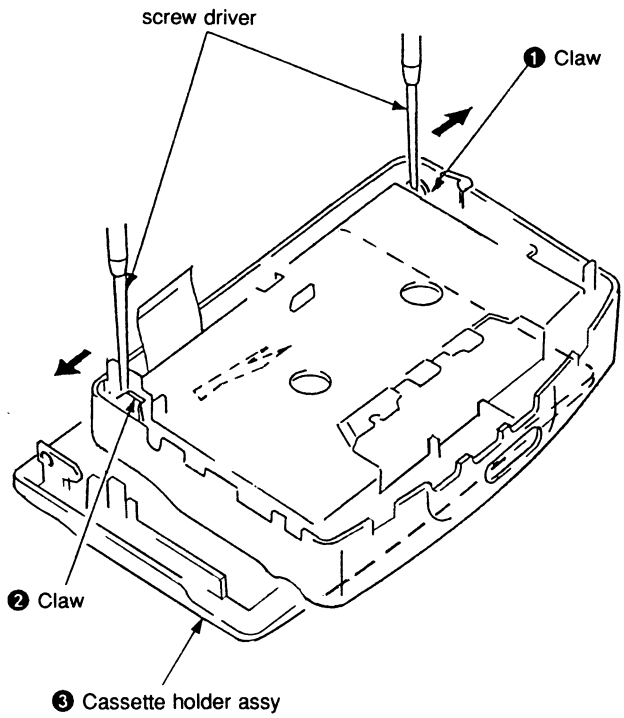
2-2. REMOVAL OF MECHANISM DECK AND MAIN BOARD



2-3. REMOVAL OF MAIN BOARD

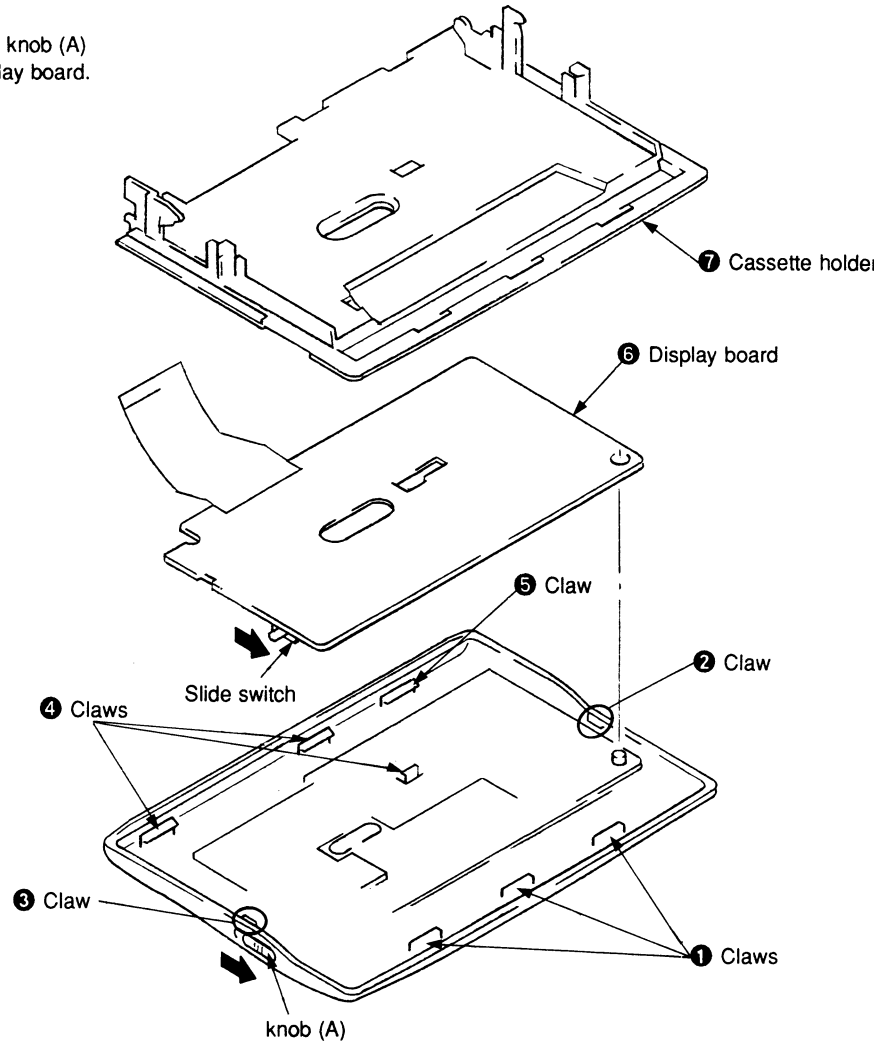


2-4. REMOVAL OF CASSETTE HOLDER ASSY



2-5. REMOVAL OF DISPLAY BOARD

Note : Adjust the side switch to knob (A) when mounting the display board.



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   playback head　　pinch roller
   capstan　　rubber belts
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (2.5V) unless otherwise noted.

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	20 — 42 g • cm (0.28 — 0.58 oz • inch)
FWD Back Tension		less than 3 g • cm (less than 0.04 oz • inch)
FF, REW	CQ-201B	more than 60 g • cm (more than 0.83 oz • inch)

3-2. ELECTRICAL ADJUSTMENTS

PRECAUTION

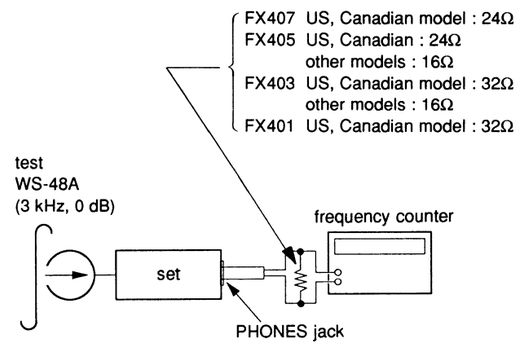
- Supplied voltage : 2.5V
- Switch and control position
  TAPE switch　: NORM
  MODE switch　: ST...EXCEPT US/ Canadian
  SENS switch　: DX...US/ Canadian
  VOLUME CONTROL : maximun
  MEGA BASS switch : NORM...EXCEPT FX401
  AVLS switch　: OFF
  AM STEP switch : 10k...US/ Canadian
  9k...EXCEPT US/ Canadian

Test Tape

Type	Signal	Used for
WS-48A	3 kHz, 0 dB	Tape Speed Adjustment

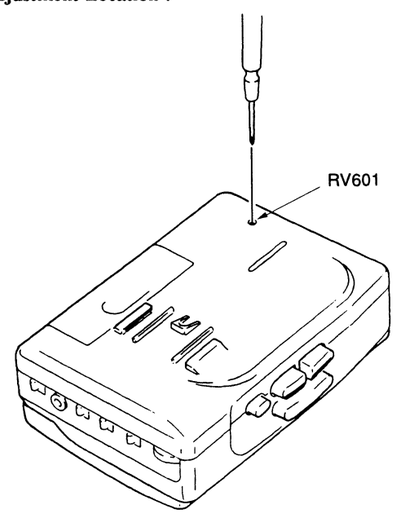
Tape speed adjustment

Procedure :



Play back WS-48A (tape center portion) in FWD mode. Adjust the RV601 so that the frequency counter reads 3,000Hz ± 15 Hz.

Adjustment Location :

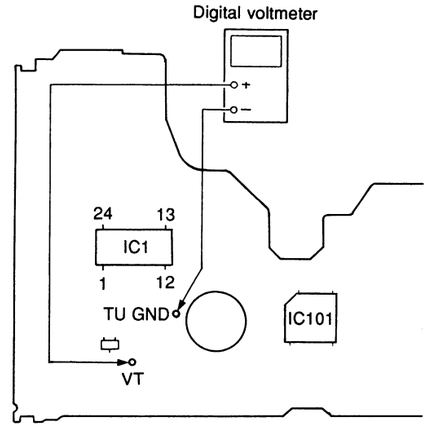


TUNER SECTION

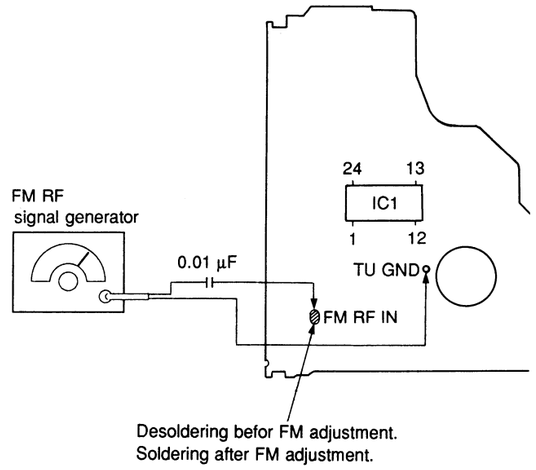
FM SECTION

setting :
FUNCTION switch : RADIO
BAND switch　　: FM

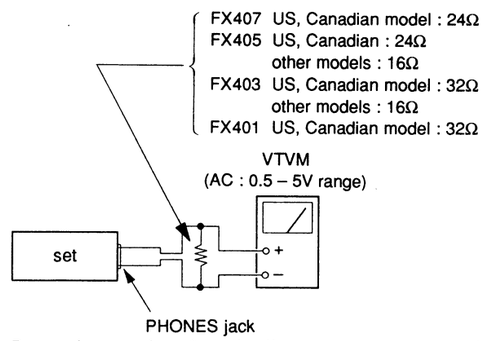
FM TUNING VOLTAGE ADJUSTMENT



FM TRACKING ADJUSTMENT



Modulation : 400Hz, 22.5kHz dev. (30%)
Ooutput level : as low as possible.

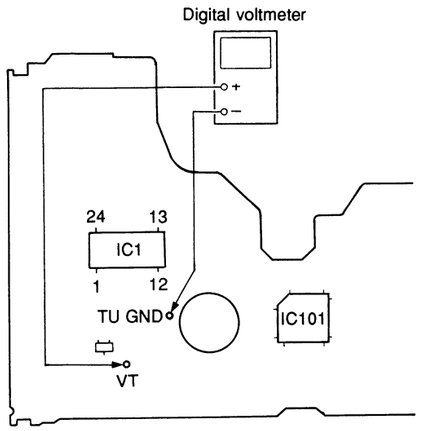


- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

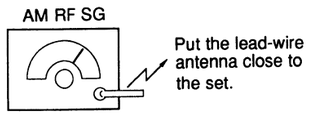
AM SECTION

setting :
FUNCTION switch : RADIO
BAND switch : AM

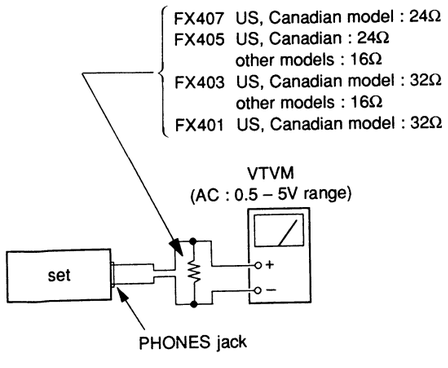
AM TUNING VOLTAGE ADJUSTMENT



AM IF ADJUSTMENT, AM TRACKING ADJUSTMENT



Modulation : 400Hz 30%
Ooutput level : as low as possible.



- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

FM TUNING VOLTAGE ADJUSTMENT
Adjust for a 2.00 ± 0.02 Vdc reading on Digital voltmeter
L3
87.5 MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	CT3
87.5 MHz	108 MHz

AM IF ADJUSTMENT
Adjust for a maximum reading on VTVM.
T1
1000 (999) kHz

( ) : EXCEPT US, Canadian model

AM TUNING VOLTAGE ADJUSTMENT
Adjust for a 1.50 ± 0.02 Vdc reading on Digital voltmeter
L4
530 (531) kHz

( ) : EXCEPT US, Canadian model

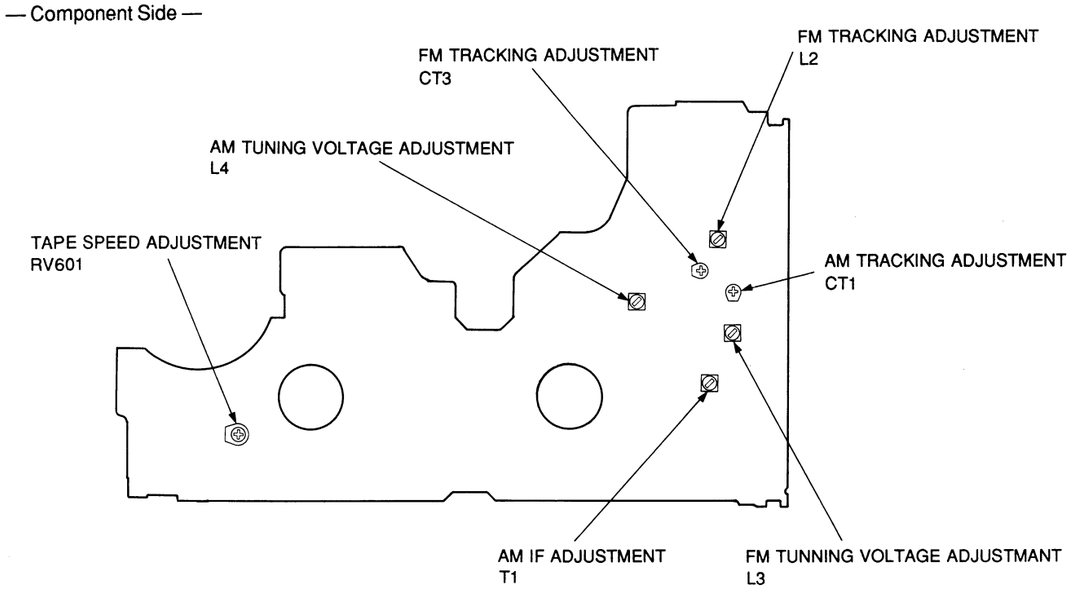
AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
ANT1	CT1
620 (621) kHz	1400 (1404) kHz

( ) : EXCEPT US, Canadian model

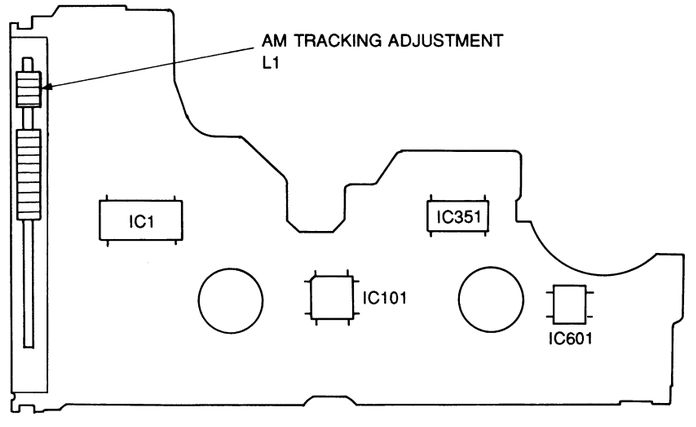
Adjustment Part Location Diagram :

[MAIN BOARD]

— Component Side —

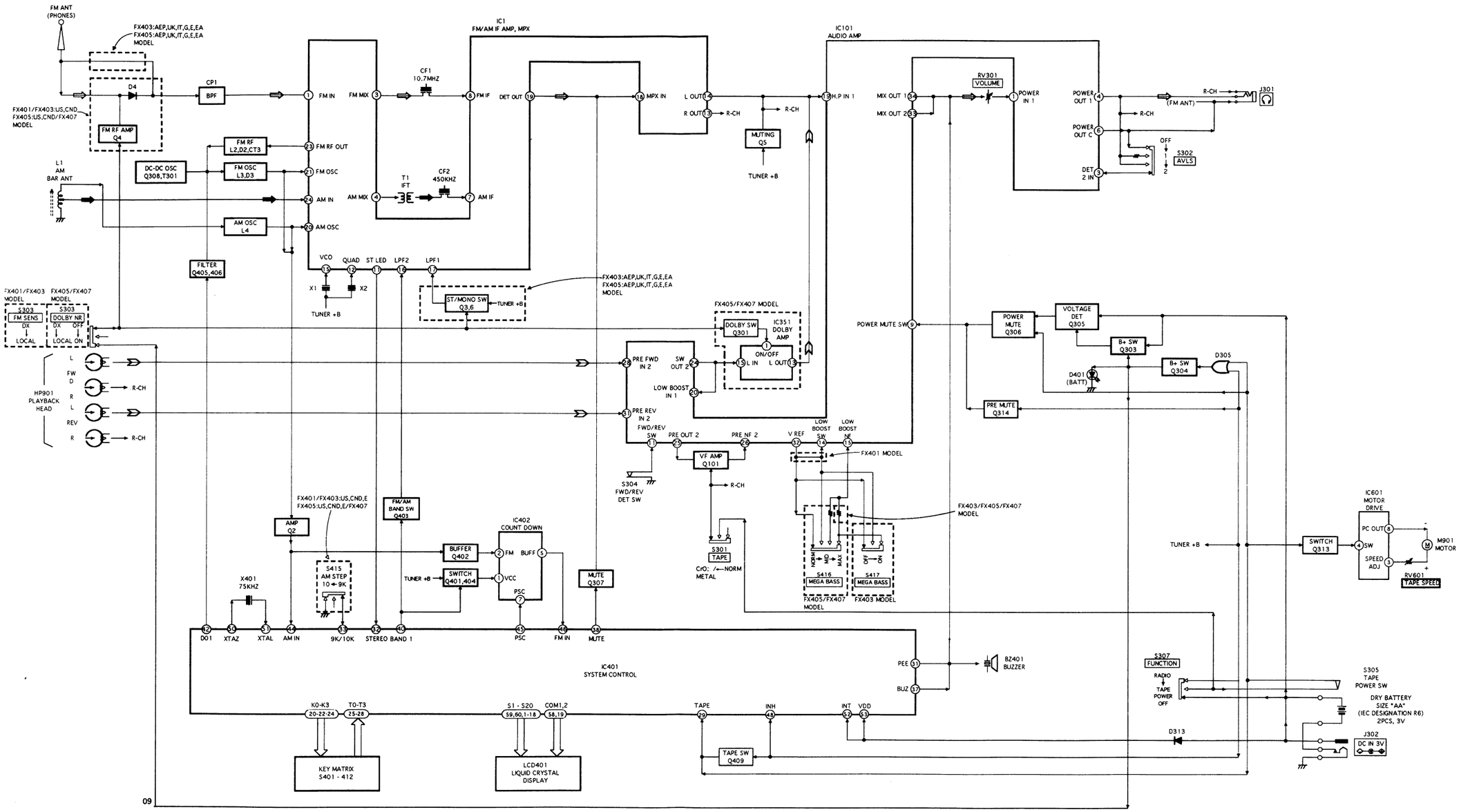


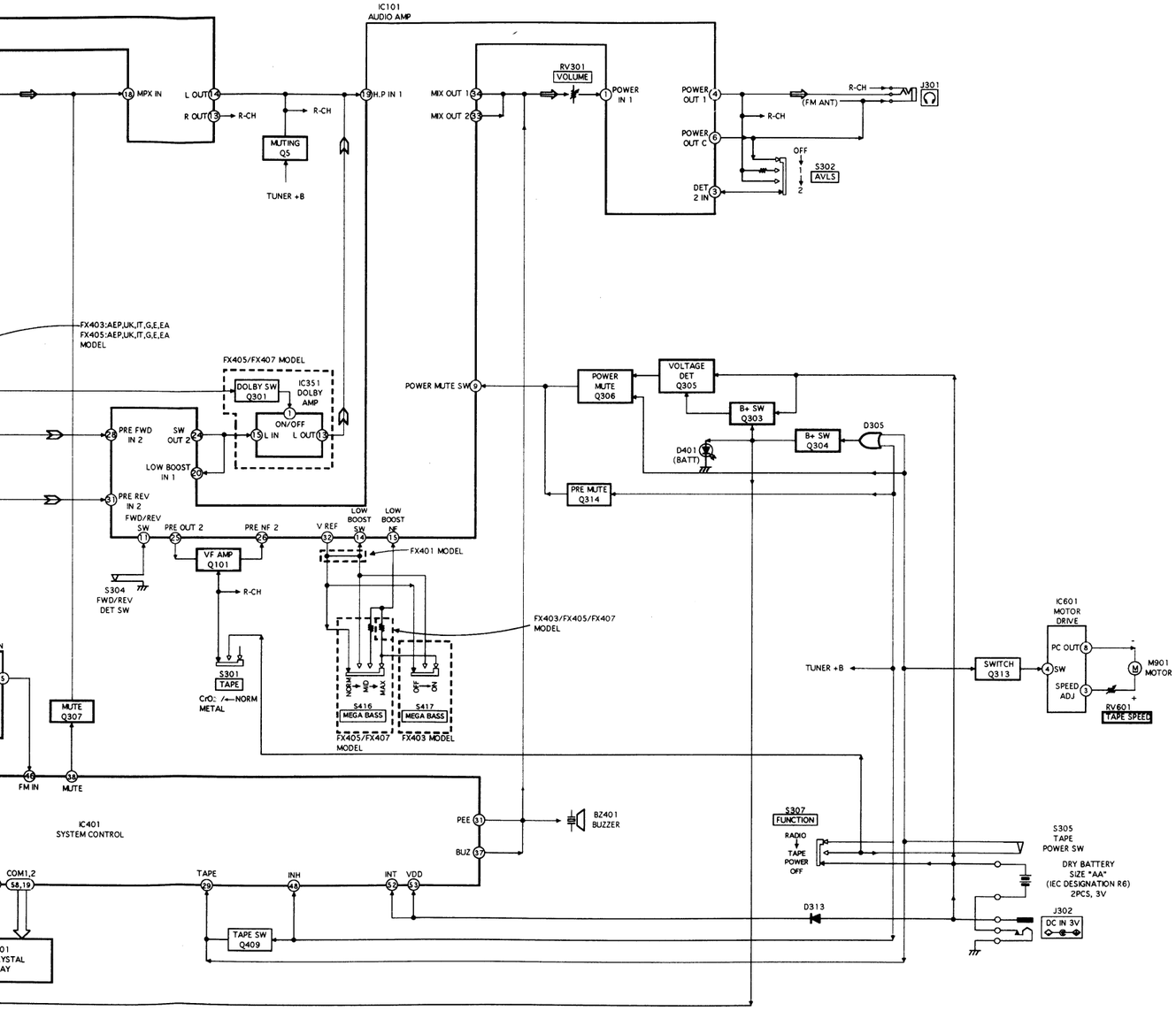
— Conductor Side —



SECTION 4
DIAGRAMS

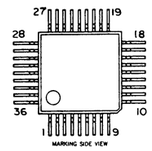
4-1. BLOCK DIAGRAM



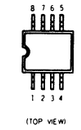


4-2. SEMICONDUCTOR LEAD LAYOUTS

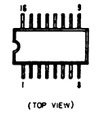
LA4582BM



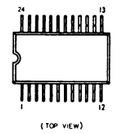
MM1038AFF
TD6134AF



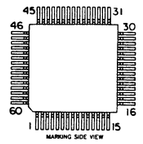
NJM2063AM



TA8122AF



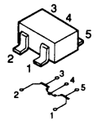
TC9308AF-064



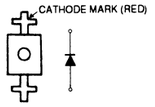
RN1306
RN1310
RN2302
RN2305
UN5213
UN5216
2SA1162-G
2SB624-BV5
2SC2223-F13
2SC4116-YG

2SK160A-K25

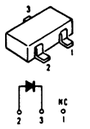
XN1215



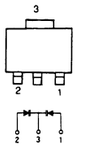
LN01201C (Q)



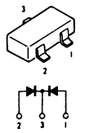
MA3110
RB411D



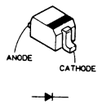
SVC341-L



DAN202K



DTZ3.3A
DTZ5.6A
1T363
1SS317



4-3. PRINTED WIRING BOARDS

• See page 13 for Semiconductor Lead Layouts.

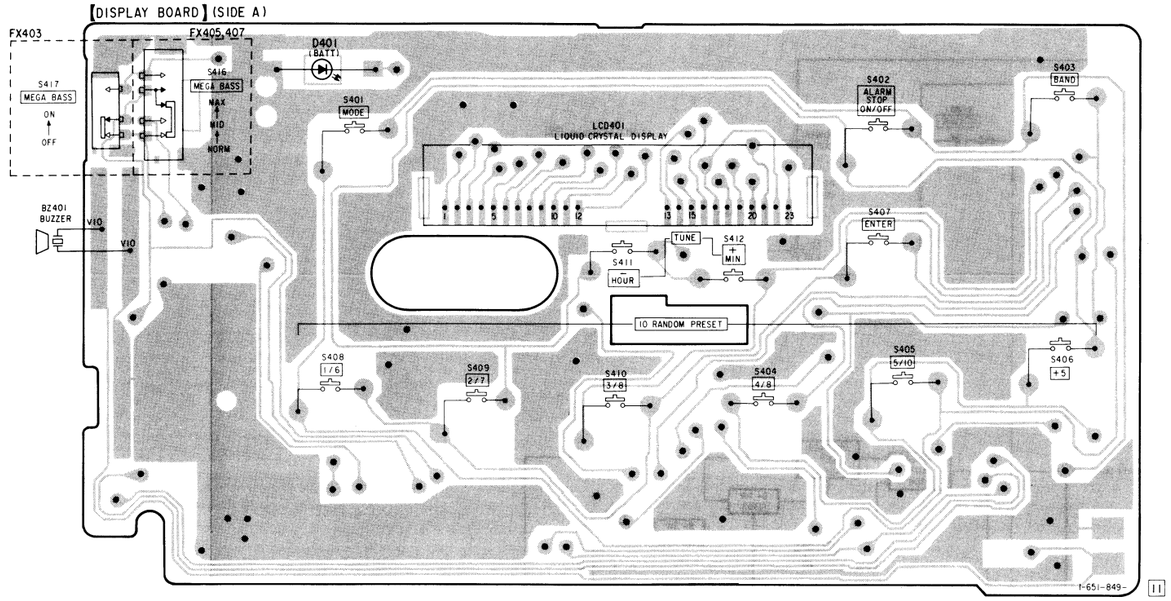
• Semiconductor Location

Ref. No.	Location
D1	I-2
D2	J-18
D3	H-19
D4	G-18
D305	G-13
D311	F-11
D313	G-9
D316	G-14
D317	J-2
D318	J-2
D319	K-2
D320	J-2
D321	H-8
D322	G-1
D323	G-11
D401	A-3
IC1	I-17
IC101	H-15
IC351	I-13
IC401	C-12
IC402	D-15
IC601	H-11
Q1	J-2
Q2	H-2
Q3	J-17
Q4	G-18
Q5	H-17
Q6	J-18
Q101	I-14
Q201	I-14
Q301	I-6
Q303	F-14
Q304	F-13
Q305	G-13
Q306	G-12
Q307	I-16
Q308	G-8
Q313	H-8
Q314	F-6
Q401	D-13
Q402	E-14
Q403	E-13
Q404	D-14
Q405	D-13
Q406	E-13
Q409	E-12

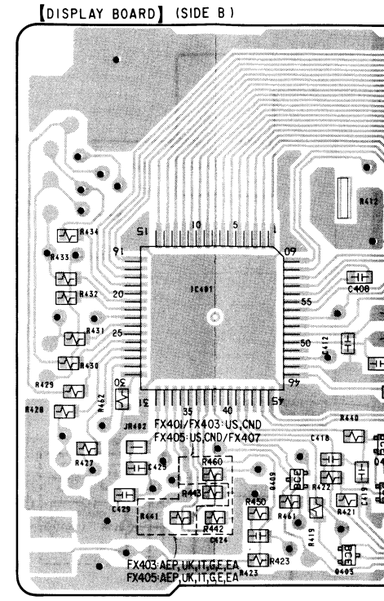
Note:

- ○—— : parts extracted from the component side.
- ●—— : parts extracted from the conductor side.
- ● : Through hole.
- [+] indicates side identified with part number.
- △ : internal component.
- ▒▒ : Pattern from the side which enable seeing. (The other layer's patterns are not indicated.)
- CND : Canadian model.
- G : German model.
- IT : Italian model.
- EA : Saudi Arabia model.

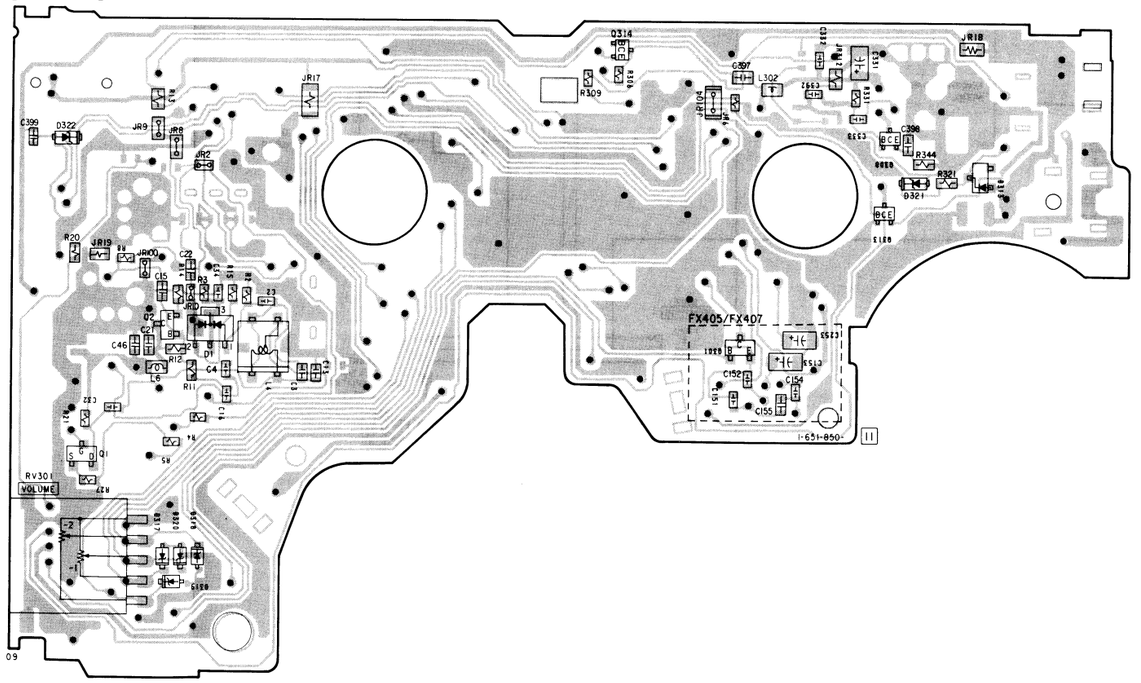
【DISPLAY BOARD】(SIDE A)



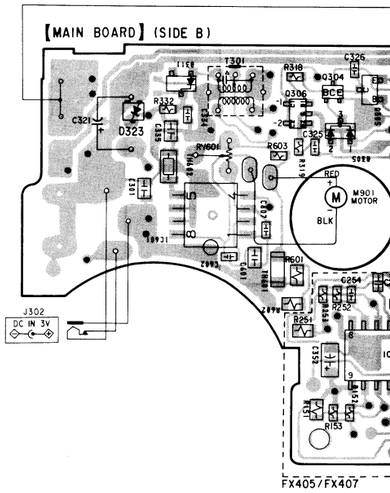
【DISPLAY BOARD】(SIDE B)



【MAIN BOARD】(SIDE A)



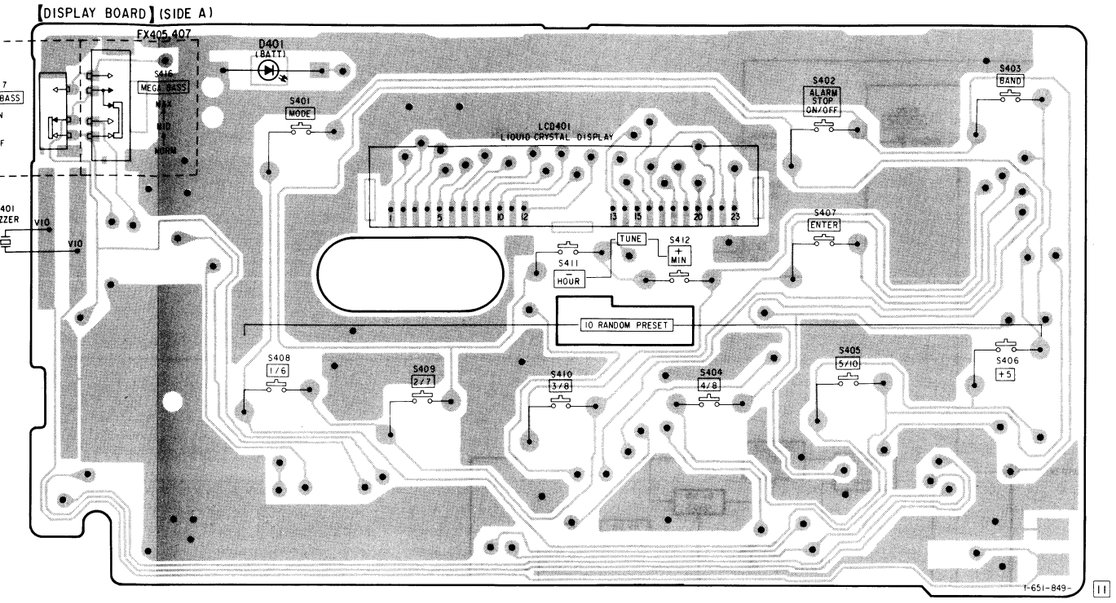
【MAIN BOARD】(SIDE B)



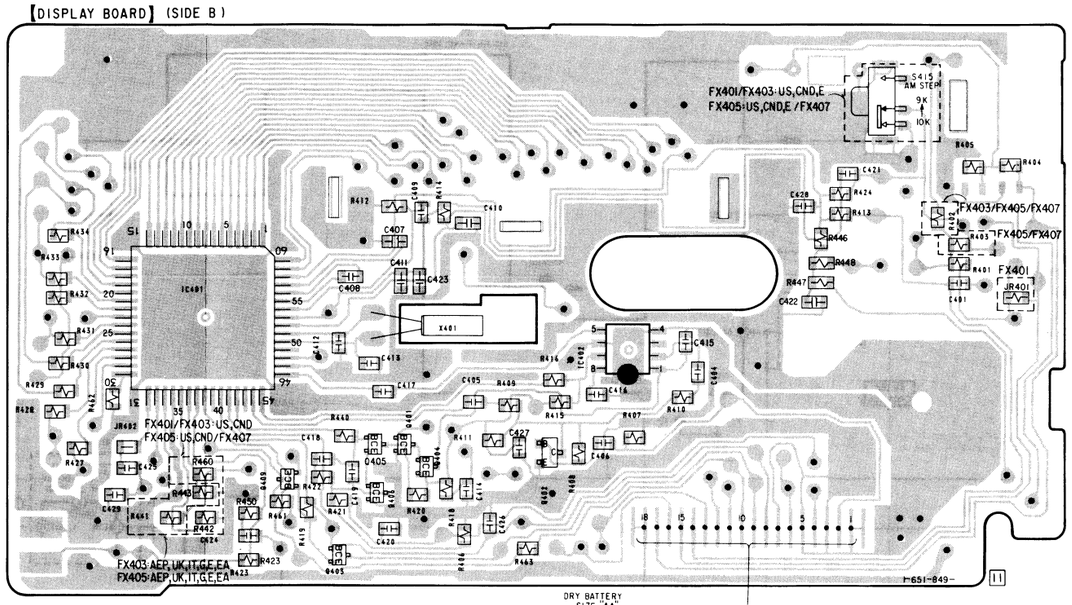
PRINTED WIRING BOARDS

→ See page 13 for Semiconductor Lead Layouts.

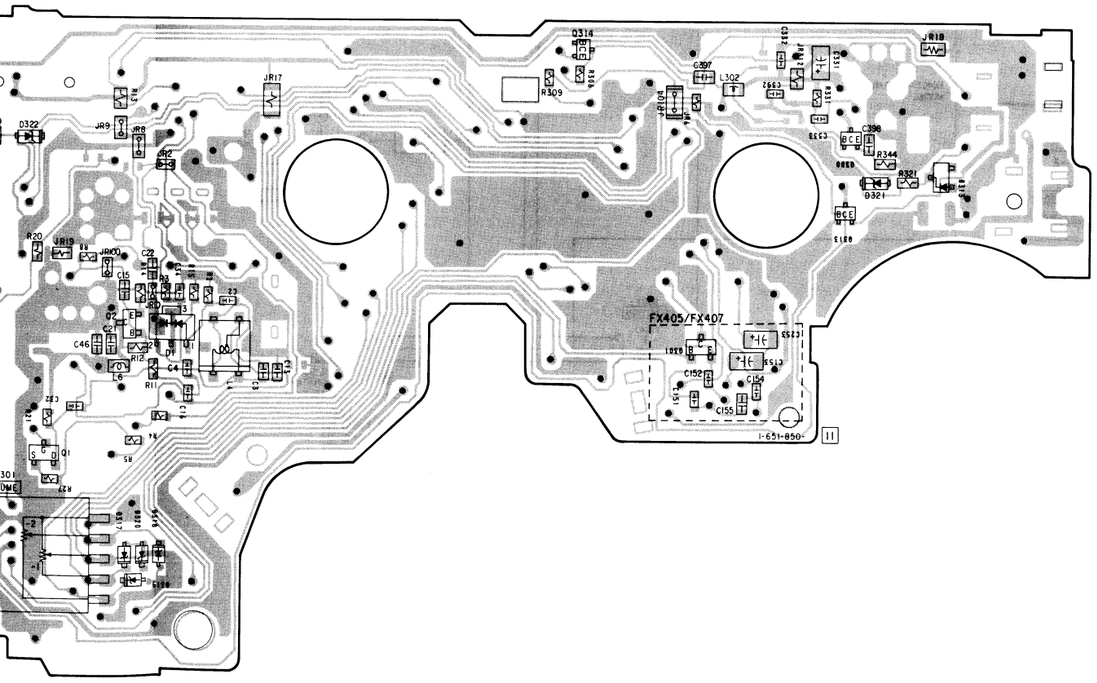
【DISPLAY BOARD】(SIDE A)



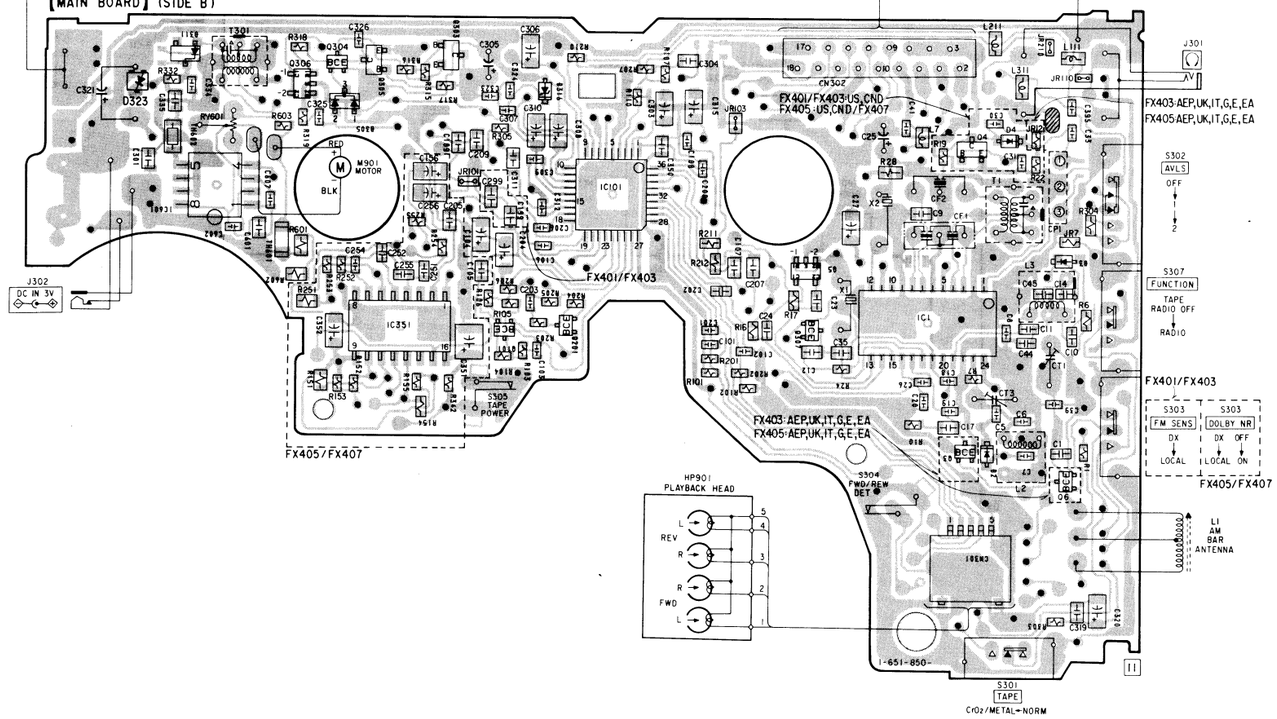
【DISPLAY BOARD】(SIDE B)



【MAIN BOARD】(SIDE A)



【MAIN BOARD】(SIDE B)



4-4. SCHEMATIC DIAGRAM

• See page 21 for IC Pin Function.

【MAIN BOARD】

FX401/FX403 — FM SENS: DX → LOCAL

FX405/FX407 — DOLBY NR: OFF → ON, DX → LOCAL

FX403: AEP, UK, IT, G, E, EA
FX405: AEP, UK, IT, G, E, EA

FX401/FX403: US, CND/
FX405: US, CND/FX407

FX403: AEP, UK, IT, G, E, EA
FX405: AEP, UK, IT, G, E, EA

FX405/FX407

IC351
DOLBY AMP
IC351
NJM2063AM

Q301
DOLBY
SWITCH

Q301
RN1304

DOLBY NR

IC1
FM/AM
IF AMP, MPX

IC101
IC101
LA4582BM
AUDIO AMP

IC601
MOTOR DRIVE

Q1
AM RF AMP

Q4
FM RF AMP

Q101, 201
NF AMP

Q303, 304
B+
SWITCH

Q305
VOLTAGE DET

Q306
POWER MUTE

Q307
RN1310
MUTE

Q308
DC-DC OSC

Q313
SWITCH

Q314
PRE MUTE

Q3, 6
ST/MONO
SWITCH

Q5
XN1215
2.8 MUTING

Q303
2SB624

Q305
2SA1162

Q306
XN1215

Q308
2SC4116

Q313
RN1304

Q314
RN1304

Q101
RN1310

Q201
RN1310

Q303
RN2302

Q304
RN1306

Q306
XN1215

D1 SVC341
D2 1T363
D3 1T363
D4 1SS317
D301 RB411D
D305 BAN202K
D307 BAN202K
D311 BAN202K
D313 RB411D
D316 DTZ5.6
D317 DTZ5.6
D318 DTZ5.6
D319 DTZ5.6
D320 DTZ5.6
D321 DZ3.3A
D322 DTZ5.6
D323 MA3110

L1 AM BAR ANTENNA
L2 FM RF
L3 FM OSC
L4 AM OSC
L6 10μH
L7 10μH
L302 10μH
L211 4.7μH
L111 4.7μH
L311 10μH

T301
AM IFT

CF1 CFE10.7MHz
CF2 SFU450kHz

X1
X2

S301 TAPE
CrO2/METAL — NORM

S302 2-1-OFF
AVLS

S303

CP1 BPF

CN301

HP901
PLAYBACK
HEAD

5304
FWD/REV
DET

RV301 10k(C)
VOLUME

TAPE SPEED

IC351 pins: VREF, GND, L/VR, R/VR, L/TC, R/TC, L/PC, R/PC, L/OUT, R/OUT, L/IN, R/IN, VCC, ON/OFF

IC101 pins: L, R, GND, FWD (L), FWD (R), REV (R), REV (L), VREF, RIP

IC1 pins: FM IN, GND, FM MIX, AM MIX, AGC, FM IF, GND, TUN LEB, ST LEB, QUAD, AM IN, FM RF, VCO 2, FM OSC, AM OSC, DET OUT, MPX IN, LPF 1, LPF 2, VCO 1, L OUT, R OUT

IC601 pins: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

C352 22 4V :TA
C351 47 4V :TA
C154 4700p
C153 0.68 25V :TA
C152 4700p
C151 6800p
C254 4700p
C253 0.68 25V :TA
C252 4700p
C251 6800p
C255 0.033
C156 4V :TA
C350 (F)
C315 22 4V :TA
C107 (F)
C207 (F)
C208 330p (B)
C108 330p (B)
C303 15 4V :TA
C304 0.47 (F)
C305 220 4V :EC
C306 16V
C307 0.01 (F)
C323 0.01 (F)
C326 0.01 (F)
C309 0.047 (F)
C310 2.2 6.3V :TA
C308 3.3 4V :TA
C311 1 (F)
C312 0.047 (F)
C206 2200p (B)
C205 1 (F)
C199 1
C299 1
C397 1
C324 0.01 (F)
C325 0.1 (F)
C601 2.2 (F)
C602 1000p
C603 0.62 1000p
C607 (2.8)
C331 22 4V
C332 0.01 (F)
C333 20k (SL)
C334 0.01
C335 1 (F)
C398 0.022
C41 100p
C46 100p
C39 100 6.3V
C25 470 4V
C9 0.01 (F)
C27 22 4V
C30 1000p (B)
C31 0.01 (F)
C16 (SL) 56p
C15 1p
C11 18p (SL)
C14 1000p (B)
C19 1000p (B)
C17 0.1 (B)
C20 0 (B)
C44 0.022
C45 100p
C16 330p (B)
C10 1000p (B)
C5 1000p (B)
C6 12p (SL)
C7 1000p (B)
C8 1000p (F)
C13 0.022 (F)
C1 2p
C11 6p (SL)
C34 0.022
C2 390p (SL)
C3 5p (SL)
C4 0.022 (B)
C32 0.01 (F)
C33 1000p (B)
C35 0.1 (B)
C12 0.47 (B)
C26 1 (F)
C41 100p

R1 100
R2 330k
R3 33k
R4 180k
R5 330k
R6 330k
R7 3.9k
R8 180k
R10 22k
R11 22k
R12 10k
R13 100k
R15 330k
R16 *
R17 *
R19 2.2k
R20 56k
R21 680
R22 680
R24 5.6k
R27 100
R28 15
R30 1k
R31 100k
R102 39k
R103 15k
R104 15k
R105 680k
R106 *
R107 *
R110 *
R112 330k
R151 430k
R152 47k
R153 3.3k
R154 4.7k
R155 18k
R201 39k
R202 39k
R203 15k
R204 15k
R205 680k
R206 *
R207 *
R210 *
R211 330k
R251 430k
R252 47k
R253 3.3k
R254 4.7k
R255 18k
R256 18k
R303 10k
R304 *
R305 22k
R306 1k
R309 390k
R316 1k
R317 330k
R318 470k
R319 100k
R321 33
R322 1k
R323 1k
R331 100k
R332 1k
R342 4.7
R344 33
R601 (1.5)
R602 (1.8)
R603 680
RV601 330
TH601 0.62 3900PPM

JR2 0
JR4 180k
JR6 0
JR7 0
JR12 0
JR17 0
JR19 0
JR100 0
JR103 0
JR104 0

(TUNER+B)
(VT)
(TAPE+B)
(+V0B)
(DPE-LEB)
(GND)
(FWD)
(VREF)
(V/B-GAIN)
(V/BOW/OFF)
(BEEP)
(LP+B)

* C23, 24
FX401/FX403: US, CND/FX405: US, CND / FX407 — 0.015
FX403: AEP, UK, IT, G, E, EA/FX405: AEP, UK, IT, G, E, EA — 0.01

*R16, 17
FX401/FX403: US, CND — 10k
FX403: AEP, UK, IT, G, E, EA — 27k
FX405: AEP, UK, IT, G, E, EA — 5.6k
FX405: US, CND/FX407 — 2.2k

*R106, 206
FX401/FX403: US, CND — 470
FX403: AEP, UK, IT, G, E, EA/FX405/FX407 — 750

*R107, 207
FX401/FX403: US, CND — 390k
FX403: AEP, UK, IT, G, E, EA/FX405: AEP, UK, IT, G, E, EA — 39k
FX405: US, CND/FX407 — 100k

*R110, 210
FX401/FX403: US, CND — 0
FX403: AEP, UK, IT, G, E, EA — 2.2
FX405/FX407 — 10

*R304
FX401/FX403: US, CND — 470k
FX403: AEP, UK, IT, G, E, EA/FX405/FX407 — 150k

09

11 12 13 14 15 16 17 18 19 20 21 22

【DISPLAY BOARD】

CN302 CN401

GND
FM/AM IN
GND
VT
GND
STEREO
GND
TUNER+B
AM/FM (BAND)
MUTE
MB GAIN
VREF
TAPE+B
VDD
MB ON/OFF
BEEP
OPE-LED
GND

Q2 2SC2223 AMP
L6 10μH
R12 10k
C22 0.01
JR10 0
JR8 0
JR9 0
C21 0.01 (F)
R14 100

Q403 FM/AM BAND SWITCH
Q403 RN2302
R408 56k
R409 1k
R410 1k
C405 100p (SL)
C404 20p (SL)
C406 0.01
C427 100p
R407 100
R411 330
Q402 2SC2223 BUFFER
C426 100p
C401 0.1 (F)
C429 1000p
C428 100p
C411 1 (F)
C423 0.01
R413 33
R404 220
D401 LN01201C (BATT)
C409 0.1
R405 1k
R412 1M
R414 10k
C410 0.047
C415 0.022
C414 0.1 (F)
R418 47k
C412 18p (SL)
C413 33p (SL)
X401 75KHz
C417 33p (SL)
C407 0.022 B
C408 0.1 (F)

IC402
COUNT DOWN
IC402 TD6134AF
R415 22k
C416 0.022
Q401,404 FM/AM BAND SWITCH

FX401
JR401 0
FX405/FX407
*R402
FX405/FX407 :10k
FX403 :56k
R401 22k
R403 56k
S416
MAX
MID
NORM
MEGA BASS
FX403/FX405/FX407
S417
ON
OFF
MEGA BASS
FX403

Q401 RN1304
Q404 RN2305
R419 10k
R420 1k
R421 10k
C420 0.01

LCD401
LIQUID CRYSTAL DISPLAY

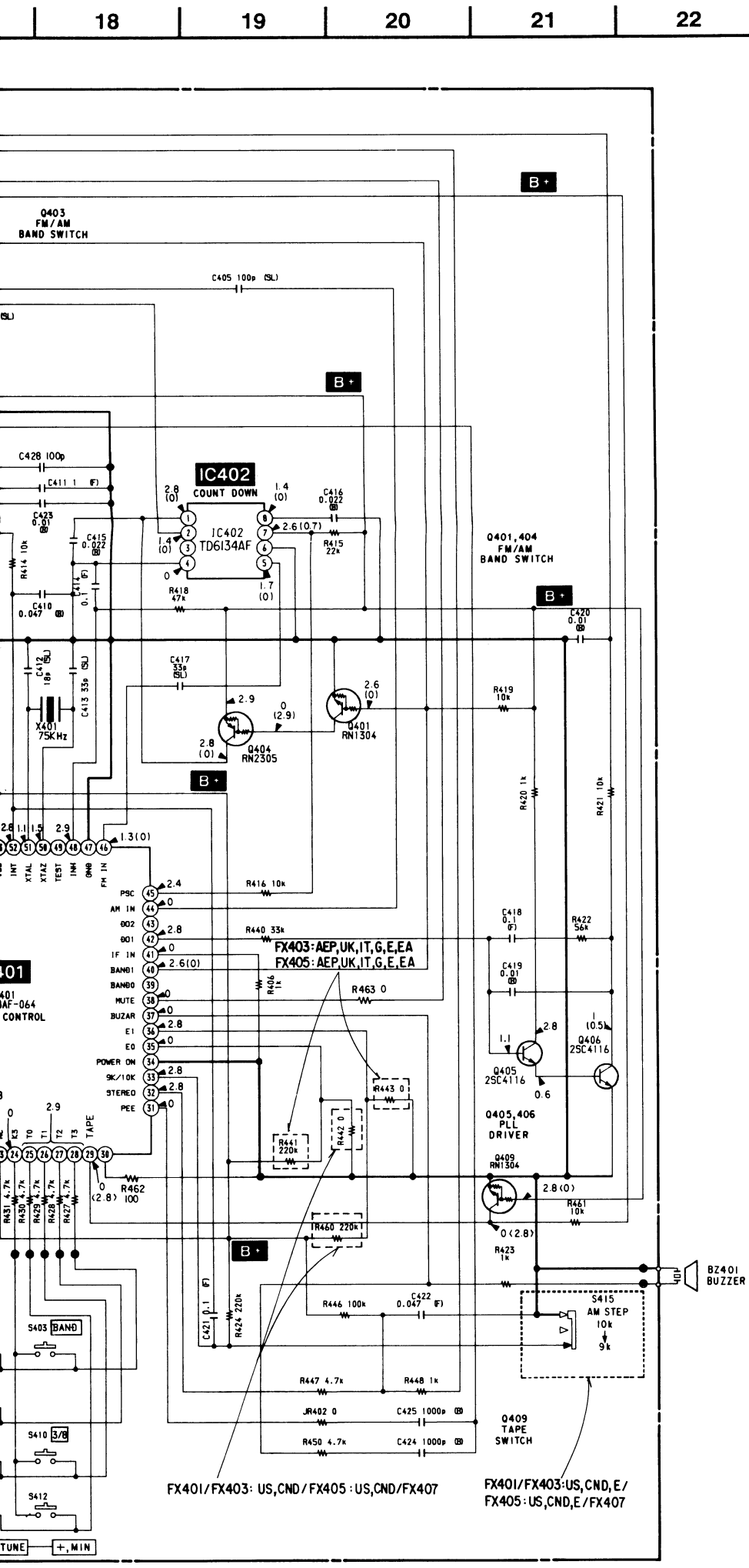
IC401
IC401
TC9308AF-064
SYSTEM CONTROL

R416 10k
R440 33k
R406 1k
R463 0
FX403:AEP,UK,IT,G,E,EA
FX405:AEP,UK,IT,G,E,EA
C418 0.1 (F)
R422 56k
C419 0.01
Q405 2SC4116
Q406 2SC4116
Q405,406 PLL DRIVER
R443 0
R441 220k
R442 0
Q409 RN1304
R461 10k
R460 220k
R423 1k
BZ401 BUZZER
C421 0.1 (F)
R424 220k
R446 100k
C422 0.047 (F)
S415 AM STEP 10k 9k
R447 4.7k
R448 1k
JR402 0
C425 1000p
R450 4.7k
C424 1000p
Q409 TAPE SWITCH
R462 100

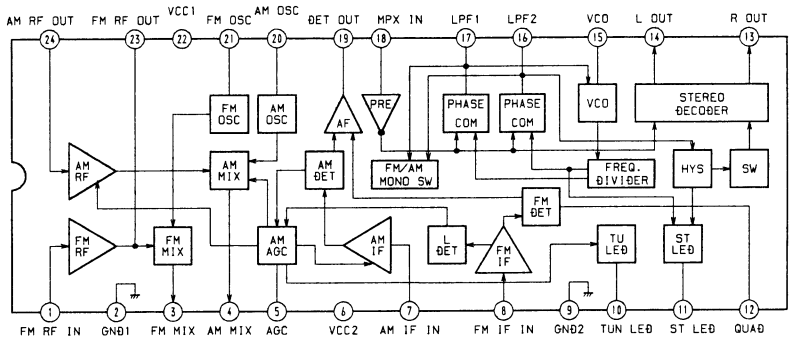
ALARM STOP, ON/OFF
S401 MODE
S402
S403 BAND
S404 4/9
S405 5/10
S406 +5
S407 ENTER
S408 1/6
S409 2/7
S410 3/8
S411
S412
-,HOUR
TUNE
+,MIN

FX401/FX403: US,CND/FX405 : US,CND/FX407
FX401/FX403:US,CND,E/FX405:US,CND,E/FX407

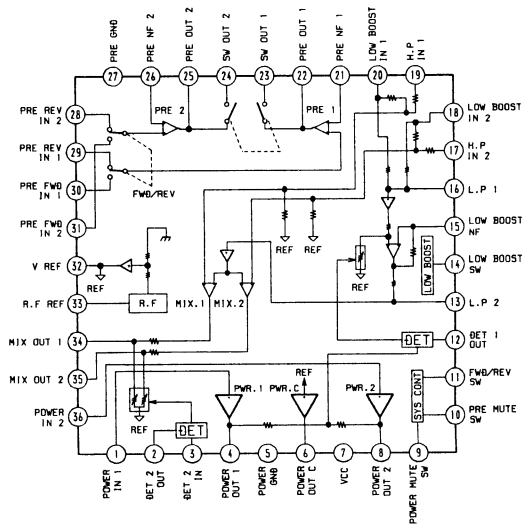
Q308 DC-DC OSC
Q308 2SC4116
R331 100k
C331 22 4V
R344 33
C398 0.022
C392 100p
JR312 0
S305 TAPE POWER SW
RADIO
TAPE
RADIO OFF
S307 FUNCTION
C399 100p
JR18 0
D313 RB411D
C321 0.056 3.5V
C301 1 (F)
C395 0.1
DRY BATTERY SIZE "AA" (IEC DESIGNATION) R6 2PCS, 3V
TOTAL CURRENT
FM : 58mA
AM : 45mA
PLAY: 140mA
FF/REW : 150mA
J302
DC IN 3V
C601 2.2 (F)
C602 1000p
IC601 MM1038AFF
M901 MOTOR
BLK
RED
TH602 2K 1000PPM
JR210 0
JR110 0
4.7μH
4.7μH
10μH
R
L
COM
J301
IC601
MOTOR DRIVE



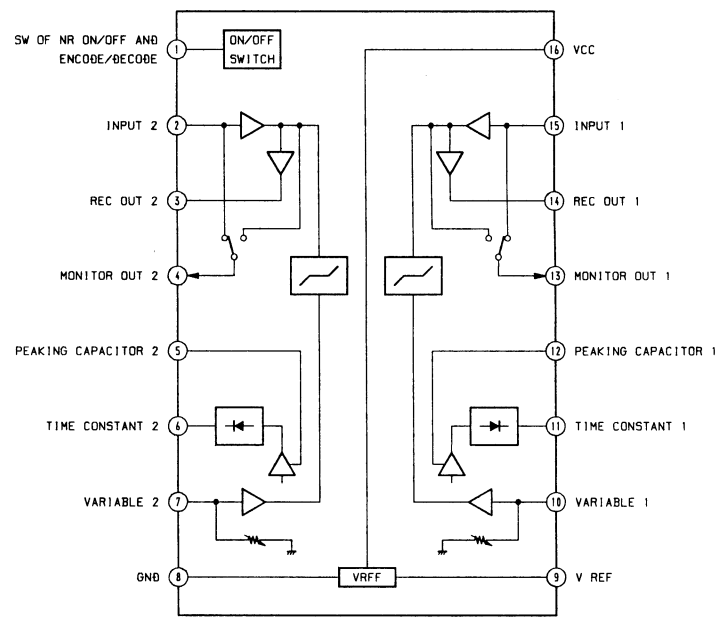
IC1 TA8122F



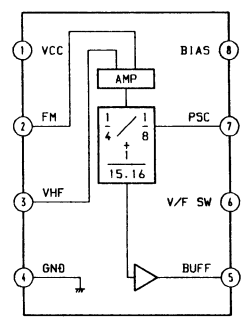
IC101 LA4582BM



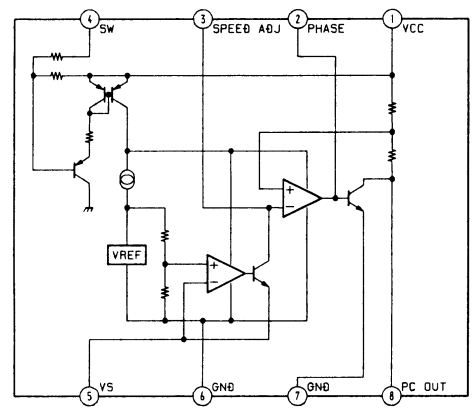
IC351 NJM2063AM



IC402 TD6134AF



IC601 MM1038AFF



Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  ( ) : AM
  < > : TAPE PLAY
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Power voltage is dc 3 V and fed with regulated dc power supply from battery terminal.
- Total current is measured with no cassette installed.
- CND : Canadian model.
- G : German model.
- IT : Italian model.
- EA : Saudi Arabia model.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : PB

4-5. IC PIN FUNCTION

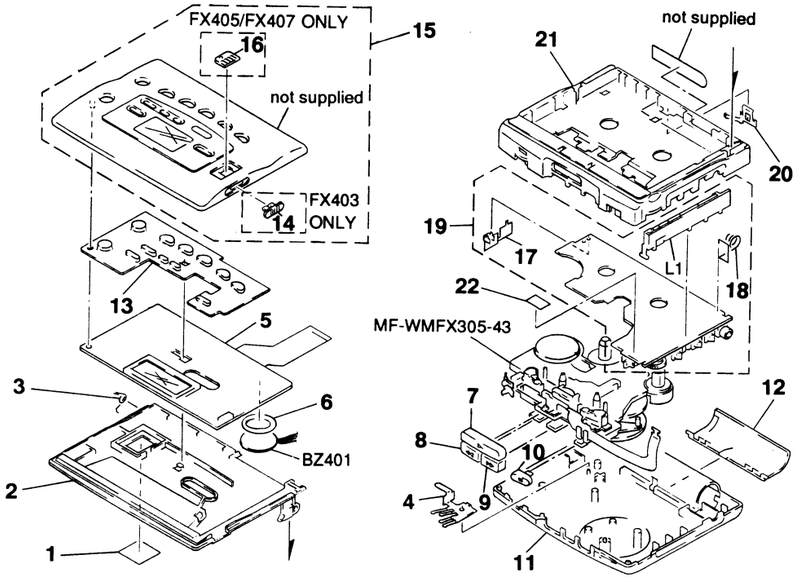
IC401 TC9308AF-064 (CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 – 18	S3 – S20	O	Segment signal output to LCD.
19	COM2	O	Common signal output to LCD.
20 – 22	K0 – K2	I	Key input
23	NC	–	VDD
24	K3	I	Key input.
25 – 28	T0 – T3	O	Timing signal output for key matrix.
29	TAPE	I	Tape signal input. ("H": TAPE)
30	NC	–	Not used.
31	PEE	O	Beep signal output.
32	STEREO	I	Stereo signal input. Stereo indicator in LCD light up by "L" Level.
33	9K/10K	I	AM channel plan signal input for 9kHz/10kHz. ("H": 9kHz, "L": 10kHz)
34	POWER ON	–	GND
35	E0	–	Destination discrimination.
36	E1	–	
37	BUZ	O	Buzzer pulse output.
38	MUTE	O	Muting signal output.
39	BAND0	O	Not used.
40	BAND1	O	BAND1 output ("H": AM, "L": FM).
41	IF IN	I	IF counter signal input. (Pull down (1kΩ))
42	DO1	O	Phase comparator signal output.
43	DO2	O	Not used.
44	AM IN	I	AM programmable counter input.
45	PSC	O	Prescaler control signal output (1/15: "L", 1/16: "H").
46	FM IN	I	FM programmable counter input.
47	GND	–	GND
48	$\overline{INH}$	I	Radio ON/OFF control signal input ("H": Radio ON, "L": Radio OFF).
49	TEST	I	Not used.
50	$\overline{XTAZ}$	O	Crystal oscillator (75kHz) for reference signal connection port.
51	XTAL	I	Crystal oscillator (75kHz) for reference signal connection port.
52	$\overline{INT}$	I	System reset signal input ("L": RESET).
53	VDD	–	Voltage supply to LCD drive.
54	VLCD	–	Voltage step up capacitor connection port.
55	C1	–	Voltage step up capacitor connection port.
56	C2	–	Voltage step up capacitor connection port.
57	C3	–	Stabilizer capacitor for LCD drive voltage connection port.
58	COM1	O	Common signal output to LCD.
59, 60	S1, S2	O	Segment signal output to LCD.

SECTION 5
EXPLODED VIEWS

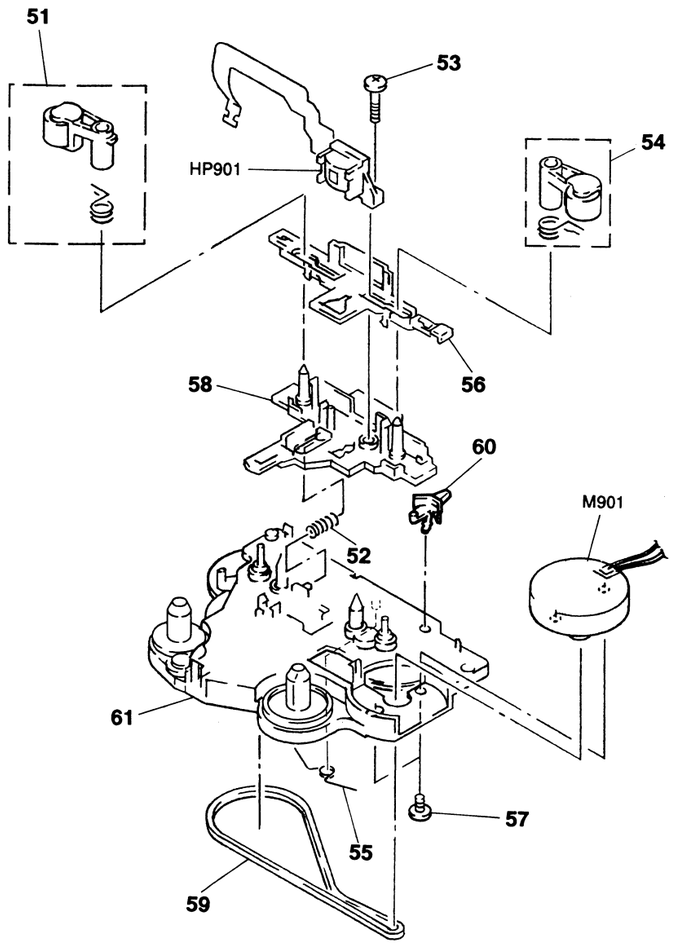
NOTE:
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts color Cabinet's color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of this parts list.
- CND : Canadian model
- G : German model
- IT : Italian model
- EA : Saudi Arabia model

5-1. ORNAMENT BLOCK



Ref. No.	Part No.	Description	Remark
1	3-910-760-01	PLATE, BLIND	
2	3-910-770-01	HOLDER, CASSETTE (FX401/FX403:CND, E, US/FX405:CND, E, US/FX407)	
2	3-910-770-11	HOLDER, CASSETTE (FX403:G, AEP, IT, UK, EA/FX405:G, AEP, IT, UK, EA)	
3	3-910-924-01	SPRING, TORSION	
4	3-910-908-01	GROUND, MOTOR	
5	A-3016-550-A	DISPLAY BOARD, COMPLETE (FX405:CND, US/FX407)	
5	A-3016-552-A	DISPLAY BOARD, COMPLETE (FX401)	
5	A-3016-554-A	DISPLAY BOARD, COMPLETE (FX403:CND, US)	
5	A-3016-556-A	DISPLAY BOARD, COMPLETE (FX403:G, AEP, IT, UK, EA)	
5	A-3016-557-A	DISPLAY BOARD, COMPLETE (FX403:E)	
5	A-3016-559-A	DISPLAY BOARD, COMPLETE (FX405:G, AEP, IT, UK, EA)	
5	A-3016-560-A	DISPLAY BOARD, COMPLETE (FX405:E)	
6	3-910-759-01	SHEET (BUZZER), ADHESIVE	
7	3-910-918-11	BUTTON (PLAY)	
8	3-910-917-11	BUTTON (REW)	
9	3-910-916-11	BUTTON (FF)	
10	3-910-915-11	BUTTON (STOP)	
11	3-910-767-01	CABINET (REAR)	
12	3-910-764-01	LID, BATTERY CASE	
13	3-910-766-01	BUTTON, RUBBER (FX401/FX403)	
13	3-910-766-11	BUTTON, RUBBER (FX405/FX407)	
14	3-910-544-01	KNOB (A) (FX403)	
15	X-3368-026-1	PLATE (B) ASSY, ORNAMENTAL (FX405)	
15	X-3368-036-1	PLATE (C) ASSY, ORNAMENTAL (FX401)	
15	X-3368-037-1	PLATE (B) ASSY, ORNAMENTAL (FX407)	
15	X-3368-038-1	PLATE (A) ASSY, ORNAMENTAL (FX403)	
16	3-910-545-01	KNOB (B) (FX405)	
16	3-910-545-11	KNOB (B) (FX407)	
17	3-910-762-01	TERMINAL BOARD, BATTERY	
18	3-910-761-01	SPRING, BATTERY COIL	
19	A-3016-549-A	MAIN BOARD, COMPLETE (FX405:CND, US/FX407)	
19	A-3016-551-A	MAIN BOARD, COMPLETE (FX401)	
19	A-3016-553-A	MAIN BOARD, COMPLETE (FX403:CND, US)	
19	A-3016-555-A	MAIN BOARD, COMPLETE (FX403:G, AEP, E, IT, UK, EA)	
19	A-3016-558-A	MAIN BOARD, COMPLETE (FX405:G, AEP, E, IT, UK, EA)	
20	3-364-675-01	SPRING (CASSETTE)	
21	3-910-768-01	CABINET (FRONT) (FX401)	
21	3-910-768-11	CABINET (FRONT) (FX403:CND, US)	
21	3-910-768-21	CABINET (FRONT) (FX403:G, AEP, IT, UK)	
21	3-910-768-31	CABINET (FRONT) (FX405:CND, US)	
21	3-910-768-41	CABINET (FRONT) (FX405:G, AEP, IT, UK)	
21	3-910-768-51	CABINET (FRONT) (FX407)	
21	3-910-768-61	CABINET (FRONT) (FX403:E, EA)	
21	3-910-768-71	CABINET (FRONT) (FX405:E, EA)	
22	4-927-957-11	CUSHION, BATTERY CASE LID	
L1	1-501-666-11	ANTENNA, FERRITE-ROD (MW)	
BZ401	1-504-512-11	SPEAKER, PIEZOELECTRIC	

5-2. MECHANISM BLOCK (MF-WMFX305-43)



Ref.No.	Part No.	Description	Remark
51	X-3367-902-1	ARM (N) ASSY, PINCH	
52	3-364-328-01	SPRING, COMPRESSION	
53	3-910-635-01	SCREW	
54	X-3367-903-1	PINCH (R) ASSY	
55	3-910-638-11	SPRING (TOGGLE), NR	
56	3-910-643-01	ARM (NR)	
57	3-352-758-21	SCREW (M1.7), TOOTHED LOCK	
58	3-910-644-01	LEVER, PLAY	
59	3-354-868-11	BELT	
60	3-909-698-01	LEVER D SELECTION	
61	X-3368-730-1	CHASSIS ASSY	
HP901	1-500-118-11	HEAD, MAGNETIC (PLAYBACK)	
M901	1-698-353-11	MOTOR, DC	

SECTION 6
ELECTRICAL PARTS LIST

DISPLAY

NOTE:

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts color Cabinet's color
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB...,
  uPC...: μPC..., uPD...: μPD...
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- CND : Canadian model
- G : German model
- IT : Italian model
- EA : Saudi Arabia model
- Accessories and packing materials are given in the last of this parts list.

Ref.No.	Part No.	Description			Remark
	A-3016-550-A	DISPLAY BOARD, COMPLETE ********** (FX405:CND, US/FX407)			
	A-3016-552-A	DISPLAY BOARD, COMPLETE (FX401) **********			
	A-3016-554-A	DISPLAY BOARD, COMPLETE (FX403:CND, US) **********			
	A-3016-556-A	DISPLAY BOARD, COMPLETE ********** (FX403:G, AEP, EA, IT, UK)			
	A-3016-557-A	DISPLAY BOARD, COMPLETE (FX403:E) **********			
	A-3016-559-A	DISPLAY BOARD, COMPLETE ********** (FX405:G, AEP, EA, IT, UK)			
	A-3016-560-A	DISPLAY BOARD, COMPLETE (FX405:E) **********			
*	3-910-758-01	COVER, LCD			
		< BUZZER >			
BZ401	1-504-512-11	SPEAKER, PIEZOELECTRIC			
		< CAPACITOR >			
C401	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C404	1-163-100-00	CERAMIC CHIP	20PF	5%	50V
C405	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C406	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C407	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C408	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C409	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C410	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C411	1-164-346-11	CERAMIC CHIP	1uF		16V
C412	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C413	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C414	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C415	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C416	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C417	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C418	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C419	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C420	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C421	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C422	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C423	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C424	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C425	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C426	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C427	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C428	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C429	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN401	1-651-714-11	PC BOARD, FLEXIBLE			
		< DIODE >			
D401	8-719-047-43	DIODE LN01201C(Q)(BATT)			
		< IC >			
IC401	8-759-259-55	IC TC9308AF-064			
IC402	8-759-234-31	IC TD6134AF			
		< JUMPER RESISTOR >			
JR401	1-216-295-00	METAL CHIP	0	5%	1/10W (FX401)
JR402	1-216-295-00	METAL CHIP	0	5%	1/10W
		< LIQUID CRYSTAL DISPLAY >			
LCD401	1-810-466-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< TRANSISTOR >			
Q401	8-729-402-42	TRANSISTOR UN5213			
Q402	8-729-102-07	TRANSISTOR 2SC2223-F13			
Q403	8-729-014-16	TRANSISTOR RN2302			
Q404	8-729-014-22	TRANSISTOR RN2305			
Q405	8-729-230-63	TRANSISTOR 2SC4116-YG			
Q406	8-729-230-63	TRANSISTOR 2SC4116-YG			
Q409	8-729-402-42	TRANSISTOR UN5213			

Ref.No.	Part No.	Description			Remark
		< RESISTOR >			
R401	1-216-081-00	METAL CHIP	22K	5%	1/10W
R402	1-216-073-00	METAL CHIP	10K	5%	1/10W (FX405/FX407)
R402	1-216-091-00	METAL CHIP	56K	5%	1/10W (FX403)
R403	1-216-091-00	METAL CHIP	56K	5%	1/10W (FX405/FX407)
R404	1-216-033-00	METAL CHIP	220	5%	1/10W
R405	1-216-049-00	METAL CHIP	1K	5%	1/10W
R406	1-216-049-00	METAL CHIP	1K	5%	1/10W
R407	1-216-025-00	METAL CHIP	100	5%	1/10W
R408	1-216-091-00	METAL CHIP	56K	5%	1/10W
R409	1-216-049-00	METAL CHIP	1K	5%	1/10W
R410	1-216-049-00	METAL CHIP	1K	5%	1/10W
R411	1-216-037-00	METAL CHIP	330	5%	1/10W
R412	1-216-121-00	METAL CHIP	1M	5%	1/10W
R413	1-216-013-00	METAL CHIP	33	5%	1/10W
R414	1-216-073-00	METAL CHIP	10K	5%	1/10W
R415	1-216-081-00	METAL CHIP	22K	5%	1/10W
R416	1-216-073-00	METAL CHIP	10K	5%	1/10W
R418	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R419	1-216-073-00	METAL CHIP	10K	5%	1/10W
R420	1-216-049-00	METAL CHIP	1K	5%	1/10W
R421	1-216-073-00	METAL CHIP	10K	5%	1/10W
R422	1-216-091-00	METAL CHIP	56K	5%	1/10W
R423	1-216-049-00	METAL CHIP	1K	5%	1/10W
R424	1-216-105-00	METAL CHIP	220K	5%	1/10W
R427	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R428	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R429	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R430	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R431	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R432	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R433	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R434	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R440	1-216-085-00	METAL CHIP	33K	5%	1/10W
R441	1-216-105-00	METAL CHIP	220K	5%	1/10W (FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)
R442	1-216-295-00	METAL CHIP	0	5%	1/10W (FX401/FX403:CND, US/FX405:CND, US/FX407)
R443	1-216-295-00	METAL CHIP	0	5%	1/10W (FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)
R446	1-216-097-00	METAL CHIP	100K	5%	1/10W
R447	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R448	1-216-049-00	METAL CHIP	1K	5%	1/10W
R450	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R460	1-216-105-00	METAL CHIP	220K	5%	1/10W (FX401/FX403:CND, US/FX405:CND, US/FX407)
R461	1-216-073-00	METAL CHIP	10K	5%	1/10W
R462	1-216-025-00	METAL CHIP	100	5%	1/10W
R463	1-216-295-00	METAL CHIP	0	5%	1/10W

Ref.No.	Part No.	Description			Remark
		< SWITCH >			
S415	1-692-430-11	SWITCH, SLIDE (AM STEP) (FX401/FX403:CND, E, US/FX405:CND, E, US/FX407)			
S416	1-571-506-41	SWITCH, SLIDE (MEGA BASS) (FX405/FX407)			
S417	1-692-430-11	SWITCH, SLIDE (MEGA BASS) (FX403)			
		< VIBRATOR >			
X401	1-577-262-11	VIBRATOR, CRYSTAL (75kHz)			
**********					
	A-3016-549-A	MAIN BOARD, COMPLETE ********** (FX405:CND, US/FX407)			
	A-3016-551-A	MAIN BOARD, COMPLETE (FX401) **********			
	A-3016-553-A	MAIN BOARD, COMPLETE (FX403:CND, US) **********			
	A-3016-555-A	MAIN BOARD, COMPLETE ********** (FX403:G, AEP, EA, E, IT, UK)			
	A-3016-558-A	MAIN BOARD, COMPLETE ********** (FX405:G, AEP, EA, E, IT, UK)			
	3-910-761-01	SPRING, BATTERY COIL			
	3-910-762-01	TERMINAL BOARD, BATTERY			
		< CAPACITOR >			
C1	1-162-932-11	CERAMIC CHIP	2PF	0.25PF	50V
C2	1-164-145-11	CERAMIC CHIP	390PF	5%	50V
C3	1-164-118-11	CERAMIC CHIP	15PF	5%	50V
C4	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C5	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C6	1-162-942-11	CERAMIC CHIP	12PF	5%	50V
C7	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C8	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C9	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C10	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-164-437-11	CERAMIC CHIP	18PF	5%	50V
C12	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C13	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C14	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C15	1-162-905-11	CERAMIC CHIP	1PF	0.25PF	50V
C16	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C17	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C18	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C19	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C20	1-164-156-11	CERAMIC CHIP	0.1uF		25V

MAIN

Ref. No.	Part No.	Description			Remark
C21	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C22	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C23	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		(FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)			
C23	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
		(FX401/FX403:CND, US/FX405:CND, US/FX407)			
C24	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		(FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)			
C24	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
		(FX401/FX403:CND, US/FX405:CND, US/FX407)			
C25	1-104-483-11	ELECT	470uF	20%	4V
C26	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C27	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C30	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		(FX401/FX403:CND, US/FX405/FX407)			
C31	1-162-974-11	CERAMIC CHIP	0.01uF		50V
		(FX401/FX403:CND, US/FX405/FX407)			
C32	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C33	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C34	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C35	1-164-004-11	CERAMIC CHIP	0.1uF		25V
C39	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C41	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C44	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C45	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C46	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C101	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C102	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C103	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C104	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C105	1-164-346-11	CERAMIC CHIP	1uF		16V
					(FX405/FX407)
C106	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C107	1-164-346-11	CERAMIC CHIP	1uF		16V
C108	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C109	1-164-005-11	CERAMIC CHIP	0.47uF		16V
C151	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
					(FX405/FX407)
C152	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
					(FX405/FX407)
C153	1-135-146-21	TANTALUM CHIP	0.68uF	20%	25V
					(FX405/FX407)
C154	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
					(FX405/FX407)
C155	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
					(FX405/FX407)
C156	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
					(FX405/FX407)
C199	1-164-346-11	CERAMIC CHIP	1uF		16V
					(FX401/FX403)
C201	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C202	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C203	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C204	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
					(FX405/FX407)
C206	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C207	1-164-346-11	CERAMIC CHIP	1uF		16V
C208	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C209	1-164-005-11	CERAMIC CHIP	0.47uF		16V
C251	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
					(FX405/FX407)
C252	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
					(FX405/FX407)
C253	1-135-146-21	TANTALUM CHIP	0.68uF	20%	25V
					(FX405/FX407)
C254	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
					(FX405/FX407)
C255	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
					(FX405/FX407)
C256	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
					(FX405/FX407)
C299	1-164-346-11	CERAMIC CHIP	1uF		16V
					(FX401/FX403)
C301	1-164-346-11	CERAMIC CHIP	1uF		16V
C303	1-135-158-21	TANTALUM CHIP	15uF	20%	4V
C304	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C305	1-124-434-00	ELECT	220uF	20%	4V
C306	1-135-333-91	TANTAL. CHIP	1uF	20%	16V
C307	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C308	1-135-221-11	TANTAL. CHIP	3.3uF	20%	4V
C309	1-165-176-11	CERAMIC CHIP	0.047uF		16V
C310	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C311	1-164-346-11	CERAMIC CHIP	1uF		16V
C312	1-165-176-11	CERAMIC CHIP	0.047uF		16V
C315	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C319	1-164-346-11	CERAMIC CHIP	1uF		16V
C321	1-125-639-11	CAP, DOUBLE LAYERS	56000uF		3.5V
C323	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C324	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C325	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C326	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C331	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C332	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C333	1-164-113-11	CERAMIC CHIP	20PF	5%	50V
C334	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C335	1-164-346-11	CERAMIC CHIP	1uF		16V
C350	1-164-346-11	CERAMIC CHIP	1uF		16V
C351	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
					(FX405/FX407)
C352	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
					(FX405/FX407)
C392	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C395	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref.No.	Part No.	Description			Remark
C397	1-164-346-11	CERAMIC CHIP	1uF		16V
C398	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C399	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C601	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C602	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C607	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< FILTER >			
* CF1	1-577-319-11	FILTER, CERAMIC			
CF2	1-567-097-61	FILTER, CERAMIC			
		< CONNECTOR >			
CN301	1-569-252-21	HOUSING, CONNECTOR (FPC) 5P			
CN302	1-764-856-12	HOUSING, CONNECTOR 17P			
		< COMPOSITION CIRCUIT BLOCK >			
CP1	1-236-711-21	FILTER, BAND PASS			
		< TRIMMER >			
CT1	1-141-299-11	CAP, TRIMMER 6PF			
CT3	1-141-298-11	CAP, TRIMMER 10PF			
		< DIODE >			
D1	8-719-945-31	DIODE	SVC341-L		
D2	8-719-002-81	DIODE	1T363		
D3	8-719-002-81	DIODE	1T363		
D4	8-719-018-85	DIODE	1SS317		(FX401/FX403:CND, US/FX405:CND, US/FX407)
D305	8-719-914-43	DIODE	DAN202K		
D311	8-719-914-43	DIODE	DAN202K		
D313	8-719-975-40	DIODE	RB411D		
D316	8-719-977-02	DIODE	DTZ5.6A		
D317	8-719-977-02	DIODE	DTZ5.6A		
D318	8-719-977-02	DIODE	DTZ5.6A		
D319	8-719-977-02	DIODE	DTZ5.6A		
D320	8-719-977-02	DIODE	DTZ5.6A		
D321	8-719-978-03	DIODE	DTZ3.3A		
D322	8-719-977-02	DIODE	DTZ5.6A		
D323	8-719-400-84	DIODE	MA3110		
		< IC >			
IC1	8-759-230-39	IC	TA8122AF		
IC101	8-759-257-22	IC	LA4582BM		
IC351	8-759-701-07	IC	NJM2063AM (FX405/FX407)		
IC601	8-759-260-31	IC	MM1038AFF		
		< JACK >			
J301	1-565-287-11	JACK (Ω)			
J302	1-750-061-11	JACK, DC(POLARITY UNIFIED TYPE)(DC IN 3V)			

Ref.No.	Part No.	Description			Remark
		< JUMPER RESISTOR >			
JR2	1-216-864-11	METAL CHIP	0	5%	1/16W
JR6	1-216-864-11	METAL CHIP	0	5%	1/16W
JR7	1-216-864-11	METAL CHIP	0	5%	1/16W
JR8	1-216-295-00	METAL CHIP	0	5%	1/10W
JR9	1-216-295-00	METAL CHIP	0	5%	1/10W
JR10	1-216-864-11	METAL CHIP	0	5%	1/16W
JR12	1-216-864-11	METAL CHIP	0	5%	1/16W (FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)
JR17	1-216-296-00	METAL CHIP	0	5%	1/8W
JR18	1-216-295-00	METAL CHIP	0	5%	1/10W
JR19	1-216-864-11	METAL CHIP	0	5%	1/16W
JR100	1-216-864-11	METAL CHIP	0	5%	1/16W
JR101	1-216-864-11	METAL CHIP	0	5%	1/16W
JR103	1-216-295-00	METAL CHIP	0	5%	1/10W
JR104	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR110	1-216-864-11	METAL CHIP	0	5%	1/16W
JR210	1-216-864-11	METAL CHIP	0	5%	1/16W
JR312	1-216-295-00	METAL CHIP	0	5%	1/10W
		< COIL >			
L1	1-501-666-11	ANTENNA, FERRITE-ROD (MW)			
L2	1-406-802-11	COIL			
L3	1-403-697-11	COIL (WITH CORE)			
L4	1-406-177-11	COIL			
L6	1-412-006-31	INDUCTOR CHIP	10uH		
L7	1-412-006-31	INDUCTOR CHIP	10uH		
L111	1-412-002-31	INDUCTOR CHIP	4.7uH		
L211	1-412-002-31	INDUCTOR CHIP	4.7uH		
L302	1-412-006-31	INDUCTOR CHIP	10uH		
L311	1-412-006-31	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-117-83	TRANSISTOR	2SK160A-K25		
Q2	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3	8-729-014-16	TRANSISTOR	RN2302		(FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)
Q4	8-729-230-63	TRANSISTOR	2SC4116-YG		(FX401/FX403:CND, US/FX405:CND, US/FX407)
Q5	8-729-403-17	TRANSISTOR	XN1215		
Q6	8-729-402-42	TRANSISTOR	UN5213		(FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)
Q101	8-729-421-26	TRANSISTOR	UN5216		
Q201	8-729-421-26	TRANSISTOR	UN5216		
Q301	8-729-402-42	TRANSISTOR	UN5213 (FX405/FX407)		
Q303	8-729-162-45	TRANSISTOR	2SB624-BV5		
Q304	8-729-014-02	TRANSISTOR	RN1306		
Q305	8-729-216-22	TRANSISTOR	2SA1162-G		
Q306	8-729-403-17	TRANSISTOR	XN1215		
Q307	8-729-426-26	TRANSISTOR	RN1310		
Q308	8-729-230-63	TRANSISTOR	2SC4116-YG		

MAIN

Ref. No.	Part No.	Description				Remark
Q313	8-729-402-42	TRANSISTOR	UN5213			
Q314	8-729-402-42	TRANSISTOR	UN5213			
		< RESISTOR >				
R1	1-216-809-11	METAL CHIP	100	5%	1/16W	
R2	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R3	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R4	1-216-848-11	METAL CHIP	180K	5%	1/16W	
R5	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R6	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R7	1-216-828-11	METAL CHIP	3.9K	5%	1/16W	
R8	1-216-848-11	METAL CHIP	180K	5%	1/16W	
R10	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R11	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R12	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R13	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R14	1-216-809-11	METAL CHIP	100	5%	1/16W	
R15	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R16	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
						(FX405:CND, US/FX407)
R16	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	
						(FX405:G, AEP, EA, E, IT, UK)
R16	1-216-833-11	METAL CHIP	10K	5%	1/16W	
						(FX401/FX403:CND, US)
R16	1-216-838-11	METAL CHIP	27K	5%	1/16W	
						(FX403:G, AEP, EA, E, IT, UK)
R17	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
						(FX405:CND, US/FX407)
R17	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	
						(FX405:G, AEP, EA, E, IT, UK)
R17	1-216-833-11	METAL CHIP	10K	5%	1/16W	
						(FX401/FX403:CND, US)
R17	1-216-838-11	METAL CHIP	27K	5%	1/16W	
						(FX403:G, AEP, EA, E, IT, UK)
R19	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
						(FX401/FX403:CND, US/FX405:CND, US/FX407)
R20	1-216-842-11	METAL CHIP	56K	5%	1/16W	
						(FX401/FX403:CND, US/FX405:CND, US/FX407)
R21	1-216-819-11	METAL CHIP	680	5%	1/16W	
R22	1-216-819-11	METAL CHIP	680	5%	1/16W	
						(FX401/FX403:CND, US/FX405:CND, US/FX407)
R24	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	
R27	1-216-809-11	METAL CHIP	100	5%	1/16W	
R28	1-216-005-00	METAL CHIP	15	5%	1/10W	
R101	1-216-840-11	METAL CHIP	39K	5%	1/16W	
R102	1-216-840-11	METAL CHIP	39K	5%	1/16W	
R103	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R104	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R105	1-216-855-11	METAL CHIP	680K	5%	1/16W	
R106	1-216-817-11	METAL CHIP	470	5%	1/16W	
						(FX401/FX403:CND, US)

Ref. No.	Part No.	Description				Remark
R106	1-218-484-11	METAL GLAZE	750	5%	1/16W	
						(FX403:G, AEP, EA, E, IT, UK/FX405/FX407)
R107	1-216-840-11	METAL CHIP	39K	5%	1/16W	
						(FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)
R107	1-216-845-11	METAL CHIP	100K	5%	1/16W	
						(FX405:CND, US/FX407)
R107	1-216-852-11	METAL CHIP	390K	5%	1/16W	
						(FX401/FX403:CND, US)
R110	1-216-789-11	METAL CHIP	2.2	5%	1/16W	
						(FX403:G, AEP, EA, E, IT, UK)
R110	1-216-797-11	METAL CHIP	10	5%	1/16W	
						(FX405/FX407)
R110	1-216-864-11	METAL CHIP	0	5%	1/16W	
						(FX401/FX403:CND, US)
R151	1-216-112-00	METAL GLAZE	430K	5%	1/10W	
						(FX405/FX407)
R152	1-216-841-11	METAL CHIP	47K	5%	1/16W	
						(FX405/FX407)
R153	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
						(FX405/FX407)
R154	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
						(FX405/FX407)
R155	1-216-836-11	METAL CHIP	18K	5%	1/16W	
						(FX405/FX407)
R201	1-216-840-11	METAL CHIP	39K	5%	1/16W	
R202	1-216-840-11	METAL CHIP	39K	5%	1/16W	
R203	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R204	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R205	1-216-855-11	METAL CHIP	680K	5%	1/16W	
R206	1-216-818-11	METAL CHIP	560	5%	1/16W	
						(FX401/FX403:CND, US)
R206	1-218-484-11	METAL GLAZE	750	5%	1/16W	
						(FX403:G, AEP, EA, E, IT, UK/FX405/FX407)
R207	1-216-840-11	METAL CHIP	39K	5%	1/16W	
						(FX403:G, AEP, EA, E, IT, UK/FX405:G, AEP, EA, E, IT, UK)
R207	1-216-845-11	METAL CHIP	100K	5%	1/16W	
						(FX405:CND, US/FX407)
R207	1-216-852-11	METAL CHIP	390K	5%	1/16W	
						(FX401/FX403:CND, US)
R210	1-216-789-11	METAL CHIP	2.2	5%	1/16W	
						(FX403:G, AEP, EA, E, IT, UK)
R210	1-216-797-11	METAL CHIP	10	5%	1/16W	
						(FX405/FX407)
R210	1-216-864-11	METAL CHIP	0	5%	1/16W	
						(FX401/FX403:CND, US)
R211	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R212	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R251	1-216-112-00	METAL GLAZE	430K	5%	1/10W	
						(FX405/FX407)
R252	1-216-841-11	METAL CHIP	47K	5%	1/16W	
						(FX405/FX407)
R253	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
						(FX405/FX407)

Ref. No.	Part No.	Description	Remark
R254	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	(FX405/FX407)
R255	1-216-836-11	METAL CHIP 18K 5% 1/16W	(FX405/FX407)
R303	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R304	1-216-847-11	METAL CHIP 150K 5% 1/16W	(FX403:G, AEP, EA, E, IT, UK/FX405/FX407)
R304	1-216-853-11	METAL CHIP 470K 5% 1/16W	(FX401/FX403:CND, US)
R305	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R306	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R309	1-216-852-11	METAL CHIP 390K 5% 1/16W	
R315	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R316	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R317	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R318	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R319	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R321	1-216-803-11	METAL CHIP 33 5% 1/16W	
R331	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R332	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R342	1-216-793-11	METAL GLAZE 4.7 5% 1/16W	(FX405/FX407)
R344	1-216-803-11	METAL CHIP 33 5% 1/16W	
R601	1-217-905-11	METAL GLAZE 1.5 5% 1/10W	
R602	1-217-907-11	METAL GLAZE 1.8 5% 1/10W	
R603	1-216-819-11	METAL CHIP 680 5% 1/16W	
		< VARIABLE RESISTOR >	
RV301	1-223-613-11	RES, VAR, CARBON 10K/10K (VOLUME)	
RV601	1-241-028-11	RES, ADJ, CARBON 330	
		< SWITCH >	
S301	1-692-901-11	SWITCH, SLIDE (TAPE)	
S302	1-692-898-11	SWITCH, SLIDE (AVLS)	
S303	1-692-901-11	SWITCH, SLIDE (DOLBY NR) (FX405/FX407)	
S303	1-692-901-11	SWITCH, SLIDE (FM SENS) (FX401/FX403)	
S304	1-571-986-31	SWITCH, LEAF (FWD/REV DET)	
S305	1-571-986-11	SWITCH, LEAF (TAPE POWER)	
S307	1-692-901-11	SWITCH, SLIDE (FUNCTION)	
		< TRANSFORMER >	
T1	1-406-694-11	COIL, AM IFT	
T301	1-426-851-11	TRANSFORMER, DC-DC CONVERTER	
		< THERMISTOR >	
TH601	1-809-029-11	THERMISTOR, POSITIVE	
TH602	1-809-029-11	THERMISTOR, POSITIVE	
		< VIBRATOR >	
X1	1-577-091-11	OSCILLATOR, CRYSTAL	
X2	1-567-097-61	FILTER, CERAMIC	

****

MISCELLANEOUS
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BZ401	1-504-512-21	SPEAKER, PIEZOELECTRIC
HP901	1-500-118-11	HEAD, MAGNETIC (PLAYBACK)
L1	1-501-666-11	ANTENNA, FERRITE-ROD (MW)
M901	1-698-353-11	MOTOR, DC

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ACCESSORIES & PACKING MATERIALS
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	1-504-228-11	HEADPHONE (MDR-013) (FX401)
	1-504-521-11	HEADPHONE (MDR-015) (FX403:CND, US/FX405:CND, US/FX407)
	3-346-518-01	CLIP, BELT
	3-758-303-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN) (FX403:G, AEP, E, IT, UK, EA)
	3-758-303-21	MANUAL, INSTRUCTION (ENGLISH) (FX401:US/FX403:CND, US)
	3-758-303-31	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN) (FX401:CND/FX403:CND)
	3-758-303-41	MANUAL, INSTRUCTION (DUTCH, SWEDISH, ITALIAN, PORTUGUESE) (FX403:AEP, IT)
	3-758-304-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN) (FX405:G, AEP, E, IT, UK, EA)
	3-758-304-21	MANUAL, INSTRUCTION (ENGLISH) (FX405:US/FX407)
	3-758-304-31	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (FX405:CND)
	3-758-304-41	MANUAL, INSTRUCTION (DUTCH, SWEDISH, ITALIAN, PORTUGUESE) (FX405:AEP, IT)
*	3-910-200-01	CUSHION (FX401:CND/FX403:CND/FX405:CND)
*	3-910-236-01	INDIVIDUAL CARTON (FX401:CND)
*	3-910-287-01	INDIVIDUAL CARTON (FX403:CND)
*	3-910-288-01	INDIVIDUAL CARTON (FX403:G, AEP, IT, UK)
*	3-910-289-01	INDIVIDUAL CARTON (FX403:E)
*	3-910-297-01	INDIVIDUAL CARTON (FX405:CND)
*	3-910-298-01	INDIVIDUAL CARTON (FX405:G, AEP, IT, UK)
*	3-910-299-01	INDIVIDUAL CARTON (FX405:E)
*	3-910-312-01	CUSHION (FX403:G, AEP, E, IT, UK, EA/ FX405:G, AEP, E, IT, UK, EA)
	8-953-538-90	HEADPHONE MDR-E741//K SET (FX403:G, AEP, E, IT, UK, EA/FX405:G, AEP, E, IT, UK, EA)
	X-3329-657-1	ATTACHMENT ASSY (FX403:G, AEP, E, IT, UK/ FX403:G, AEP, E, IT, UK/FX405:G, AE)